THIS MONTH'S COVER

Aerosol industry representatives from all over the U.S. and Canada are gathering at Chicago's Hotel Drake for the 43rd Mid-year Meeting of the Chemical Specialties Manufacturers Association.

JUNE, 1957 VOL. 2, No. 6

AEROSOL AGE

The magazine of pressure packaging

Feature Articles

SYMPOSIUM—FILL YOUR OWN AEROSOLS OR USE A CUSTOM FILLER? 24

CSMA 43rd MIDYEAR MEETING 29

SUN TUBE ASSEMBLY UNIT BRINGS AUTOMATION TO VALVE INDUSTRY 30

TECHNIQUES IN PRESSURE FILLING 34
By James Gottleib

PLASTIC CONTAINERS "COME OF AGE" 37
By Robert Abplanalp and Joseph Pizzuro

GIBBERELLIC ACID, A NEW PLANT GROWTH STIMULANT 43

LANOLINS IN AEROSOLS—III 49

FLOWED GASKETS—A CONNECTICUT COMPANY CREATES A STIR IN THE VALVE INDUSTRY 44

AEROSOLS IN REVIEW 51

Departments

IN THE SPOTLIGHT THIS MONTH 16

NEW PRODUCTS & PACKAGES 32

PRESSURE PACKAGING OVERSEAS 61
By Dr. Tom C. Clark

NEWS OF PRESSURE PACKAGING 66

PRODUCTS, PROCESSES, BULLETINS 83

WHO'S WHO IN PRESSURE PACKAGING 86

CUSTOM FILLERS AND PACKERS 91

NEW PATENTS 95

CLASSIFIED ADVERTISEMENTS 97

INDEX TO ADVERTISEMENTS 99

OVER THE TRANSOM 100

Wayne E. Dorland
Editor

Donald A. Davis
Managing Editor

Eleonore T. Kanar
Technical Editor

Ralph Dorland
Advertising Manager

Robert Garty
P. O. Box 126
Park Forest, Illinois
Skyline 6-4499
Midwestern Manager

Roger Appleby
Eastern District Manager

Doris Metz
Circulation

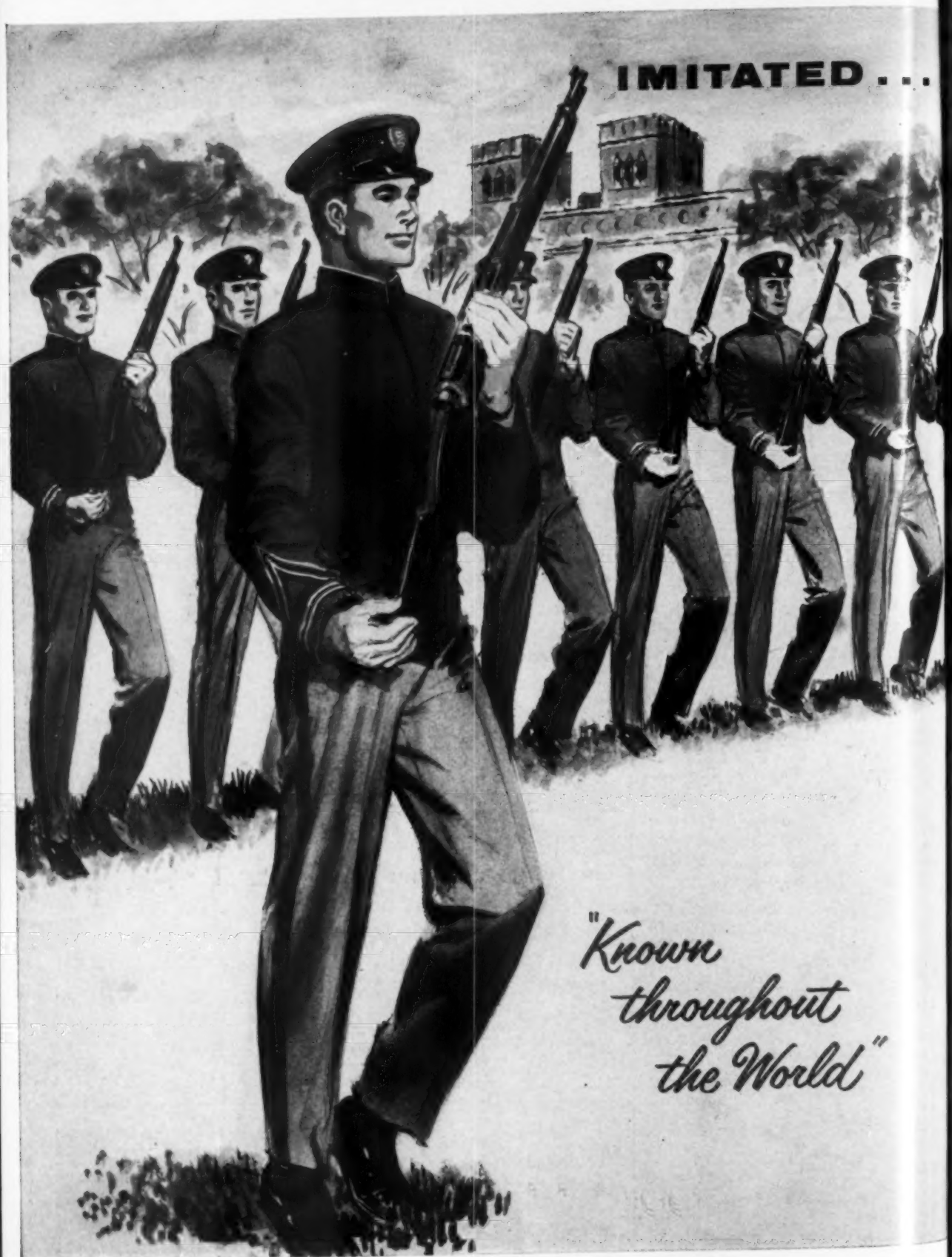
Address all correspondence to Box No. 31, Caldwell, N. J.

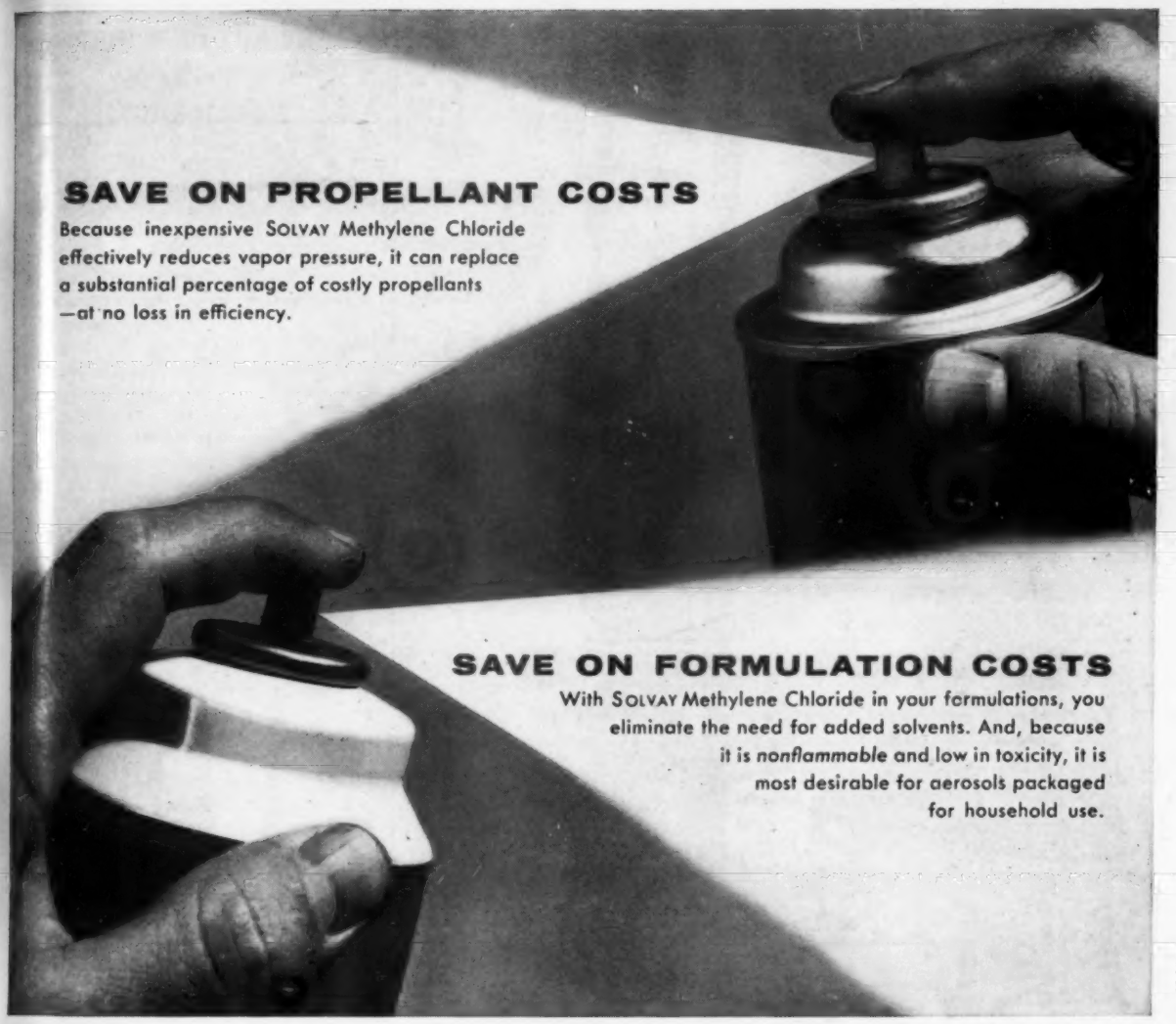
Subscription Rates: U. S., one year $3, two years $5; Canada and Pan America one year $4, two years $7; Foreign one year $7, two years $12.

Single Copies: current issue: $0.50. Postage and handling charges for foreign countries on single copies: $1.00.

Published monthly on the 20th by Aerosol Publications, Inc. at 229 West 28th St., New York, N. Y. Advertising, Subscription and Editorial Office: Box No. 31, Caldwell, N.J. Advertising rates on application. Closing date for copy — 1st of the month preceding month of issue.

Accepted as controlled circulation publication at New York, New York.


IMITATED . . .
"Known throughout the World"



SAVE ON PROPELLANT COSTS

Because inexpensive SOLVAY Methylene Chloride effectively reduces vapor pressure, it can replace a substantial percentage of costly propellants —at no loss in efficiency.

SAVE ON FORMULATION COSTS

With SOLVAY Methylene Chloride in your formulations, you eliminate the need for added solvents. And, because it is *nonflammable* and low in toxicity, it is most desirable for aerosols packaged for household use.

Under pressure to cut aerosol costs?

SOLVAY METHYLENE CHLORIDE

saves you up to 50%!

For full facts mail coupon!

SOLVAY

Aluminum Chloride • Vinyl Chloride • Calcium Chloride
Potassium Carbonate • Sodium Nitrite • Caustic Potash
Snowflake® Crystals • Sodium Bicarbonate • Caustic Soda
Ammonium Chloride • Methylene Chloride • Methyl Chloride
Ammonium Bicarbonate • Ortho-dichlorobenzene • Chloroform
Soda Ash • Monochlorobenzene • Carbon Tetrachloride • Hydrogen Peroxide
Para-dichlorobenzene • Chlorine • Cleaning Compounds

Allied Chemical

SOLVAY PROCESS DIVISION
ALLIED CHEMICAL & DYE CORPORATION
61 Broadway, New York 6, N. Y.

Please send me without cost:

- ☐ Chloromethane book
- ☐ "Methylene Chloride in Aerosol Production" by Dr. Winston H. Reed
- ☐ Sample

Name_____
Position_____
Company_____
Address_____
City_____ Zone____ State_____

THE FAST,

SURE WAY

TO APPLY

AEROSOL

OVERCAPS

The CONSOLIDATED
MODEL H-O-F CAPPER

. . . . **Automatically** sorts and applies all the various types of aerosol caps now being used.

. . . . **Applies** odd shapes as well as conventional types.

. . . . **Equipped** with variable speed controls and can be arranged for speeds from 60 to 250 caps per minute.

. . . . **Changeover** from one size container to another can be made easily and quickly.

. . . . **Easily** fitted into any aerosol filling line.

If you are using aerosol containers, be sure to get all the facts about the Consolidated H-O-F Capper for applying the overcaps before you buy.

Write for complete information

CONSOLIDATED PACKAGING MACHINERY CORP.
1400 West Ave., Buffalo 13, N. Y.

BRICKBATS and BOUQUETS from the MAILBAG

We are happy to attach our check renewing our subscription to Aerosol Age.

As a result of your publishing some of our correspondence referring to our aerosol operations in Argentina, we have received numerous letters from various companies on matters of common interest. Evidently *Aerosol Age* is the point of contact which all engaged in this growing industry have needed, and we congratulate you for the effort shown and the success obtained.

Within the next two months we will be ready to start operations as "custom fillers." With this end in view we have formed a company under the name:

VARIPACK
Soc. en Com. por Acciones
Monroe 2094
Buenos Aires
Republic Argentina

It will be devoted to the service of the aerosol industry in respect to the study of product formulas, filling for third parties, counselling and advice on the complete aerosol operation, etc.

Lubin's "Gin Fizz" has recently made its appearance on the Argentine aerosol market, in the original French form, with a reusable "Vapsol" valve. Also it has been announced that in May production of propellants will commence in the new DuPont plant.

Dr. Emiliano F. Ruth
VARIPACK
OLIVOS FCGBM
Argentina

We have been referred to you regarding the following inquiry.

A client of ours is interested in obtaining an aerosol-type compound which could be used specifically for removal of food particles from dishpans. We wish to know where we might obtain such a product, if available. If not, can you give us any advice on bomb-type cleansers?

S. Charles Lerner
ASSOCIATED ANALYTICAL LABORATORIES
New York, N. Y.

We have furnished Mr. Lerner with a list of some of the principal cleanser manufacturers interested in the aerosol field, and have referred him to recent literature on aerosol cleansers.

We are one of the first firms on the Continent to have devoted itself solely to the aerosol industry, and began doing contract loading as early as 1948. Right now we are

(*Turn to Page* 97)

Use a custom filler!

Vs.

Do it Yourself!

WHETHER to fill one's own line of aerosol products, or use the services of one or more of the many well-equipped and experienced custom fillers is a perennial question in the aerosol industry. One could get an argument on this question from almost anyone in the aerosol industry, and opinions differ widely, often depending on whether the person asked is a custom filler himself, a manufacturer of filling equipment, or is a marketer filling his own or having them filled. As a matter of fact, the question has become one which generates a good deal of heat.

When we announced our intention of conducting a survey on the comparative merits of using the services of a custom filler as against doing one's own filling, one of our friends advised us: "I feel very strongly that your proposed symposium will serve no useful purpose, indeed it may do exactly what you indicate you want to avoid—stir up a heated argument. My views on the subject are obvious, and of necessity prejudiced (he's a custom filler) . . . as I think you will find every one else's to be."

We replied that, while we appreciate that opinions are often influenced understandably by economic considerations, there are always some leaders in any field who feel they can rise above personal bias and give an appraisal of both sides of even a controversial question. We added that, while we recognize that publications which avoid every controversial topic run no danger of "stubbing their toes," neither do they serve any very useful purpose in their industry, nor do they attract any very interested readership. And finally we reiterated our belief that even such controversial matters as this are best handled by giving experts in the field an opportunity to express themselves openly, whether or not all agree.

The general concensus of the opinions we received is that no single rule can be laid down as to whether to fill one's own aerosol product line or use a custom filler. And, according to the opinions we received, the number of containers to be filled is just one factor although admittedly an important one. There *are* other considerations, too:—geography of distribution system, whether there is a large volume of a single type of product to be filled or short runs of a long series of products, whether the items under consideration are to be pressure-filled or cold-filled, whether there is some practical way to employ personnel in other operations when they would not be occupied on the aerosol line, whether the product to be filled is one which, rightly or wrongly, the company involved feels it cannot trust to be packed under any other supervision than its own.

One consultant, whose views can be considered as free from bias as possible, observed that when a marketer is thinking of a *large* volume of a single type product, or of a few types, he may profitably consider installing his own filling lines—particularly so if in the case of a pressure-filled product. (We might add that there are some who disagree with him.)

If his distribution is primarily local, the case for doing his own filling is, of course, reinforced. But if distribution is national, the custom filler's facilities are hard to duplicate.

Just where is the break point on doing one's own filling, or having it done by a filler? Some custom packagers would say that the client would have to reach the neighborhood of ten or twenty million containers before it pays him to begin his own operation. At the same time suppliers of filling equipment believe they can make out a sound case for some concerns packing a few million containers (or even less) putting in their own lines. Yet so high is the capacity of modern filling machines that even the salesman for filling equipment cannot honestly recommend purchase to a firm when they can turn out a year's production in a week or two.

One philosophical equipment salesman was frank to recognize that much credit is due the custom filler because he pioneered the business and provided a much needed service to hundreds of marketers first getting their "feet wet" in the aerosol field. He concedes that the filler will always have the inside track on the many new aerosol marketers, but cautions that "added starters" must be continually introduced into the business because inevitably many of the larger accounts will drift into their own filling operation. This, he asserts has been the common experience in the private packaging field long before aerosols were ever thought of.

So much for the general background on the subject. Following are some specific opinions. AEROSOL AGE, it should be noted, attempts to

take neither side, but instead tries to present the following informed comments by a series of well-known leaders in the industry:

Custom Filler—An Expert on Filling Equipment

Charles Beach
John C. Stalfort & Sons
Baltimore

THE reputation of the custom filler was not fallen heir to, but rather developed over a period of years as a result of careful research into such areas as formula development, procurement of raw materials, processing control, packaging variation, warehousing and shipping.

Primarily the custom filler must be an expert on filling equipment, just as an advertising company must understand customer demand. Procuring the correct equipment which must of necessity be adaptable to a great variety of products, is of course not a hit or miss proposition, but one that requires years of experience and considerable technical skill. In the rapidly expanding aerosol industry, the equipment manufacturers actually are not too familiar with a good many of the advanced problems confronting the aerosol filler working on a production basis. To the uninitiated a machine may be designated and engineered to do a specific job, yet more often than not extensive changes must be made in it so that new products and new designs may be produced both rapidly and economically. In a rapidly expanding field such as the aerosol industry, new concepts could conceivably make existing equipment obsolete overnight. To combat this possibility, the custom filler must keep his trained personnel and research departments familiar with every variation within the industry, be it new product, new container, or new propellant.

The procurement and training of key personnel in the handling and maintenance of existing equipment, while not losing sight of new developments, is an expensive proposition which cannot be safely underwritten on any basis less than a five-day week, fifty-two weeks in the year. On any other basis, the end would hardly justify the means. In the past, some concerns have tried dividing personnel between aerosol filling and other types of filling, but this has proved costly in almost every case. It has been demonstrated that personnel cannot have divided interests, for once they lose sight of their ultimate goal, a considerable loss in productivity results.

Perhaps most important of the services offered by the custom filler is the capital outlay from which the merchandiser benefits directly without any need to consider reducing his advertising budget. To be competitive, no marketer can afford to slash advertising expenditures, yet new equipment would often necessarily oblige him to do exactly that. Besides working to insure competitive advertising, the custom filler proceeds to improve existing formulas, to search for raw materials that will create new products, and above all to insure a safe, neat appearing package.

Mentioned herein are the principal services offered the distributor by the custom filler, but most important is the answer to the question, "Should I do my own filling?" The initial cost of entering the aerosol filling field has been omitted purposely, the reason being that any distributor can justify his equipment purchase if he is willing to sacrifice his advertising budget.

Listed below are filling costs as dictated by volume requirements:

One million per year	$.1110 each
Five million per year	.0575 each
Ten million per year	.0400 each
Twenty million per year	.0250 each

The custom filler offers only a service. It is to his advantage to produce his client's product as carefully as though he were merchandising that product himself. He must of necessity treat the product as his own. Naturally we in custom filling are interested in the success of our customers and we continue to feel that the most economical filling job is that done by the custom filler.

Custom Fillers Made Packaging Better and Easier

Philip Libson
Manager, Project Development Division
MAX FACTOR & CO.
Hollywood, Calif.

THE phenomenal growth of the aerosol industry must, of a necessity, attribute some major portions of its "success story" to the private loader. The parallel growth of custom fillers (from a mere four in 1945 to more than one hundred today) has not been a mere happenstance.

Basically, their major contribution to aerosol packaging has been the development of a better and easier manufacturing operation. This has been the result of constant efforts to improve techniques, striving continuously for economies.

In addition, their achievements in package and product development are a matter of record.

How does the custom filler serve the aerosol industry today? His major contributions are:

1. He produces a quality product at a competitive price.
2. He eliminates the need for additional space and trained personnel.
3. His laboratory concentrates on aerosol product and package development.
4. He serves as a "watchdog" for new ideas in better product and package.

In effect, employing a good custom filler broadens the scope of one's own activities—you supplement your own

development program in the laboratory and open the door effectively for information and knowledge related to merchandising.

The arguments for a manufacturer doing his own aerosol packaging may be summed up as follows:

1. He has closer control and supervision of formula, package components and scheduling.
2. He can effect some savings in costs if his volume permits continuous operation with a minimum of idle machine time.

The advantages of using a custom filler may outweigh the advantages of doing one's own filling, but a decision should be based on each company's individual needs after a complete analysis of all pros and cons.

Custom Filler A Less Important Factor Abroad

Andrew H. Wolff
Pegasus International Corp.
New York

ABROAD, this question—whether to fill one's own aerosol products or to subcontract the operation—is not easily answerable. Some fillers who may have started out with the idea of doing only contract work have found it profitable also to market certain types of products under their own brand names. Others who started out marketing their own aerosol products are now looking around for—and getting—contract work. There is, therefore, not as clear a distinction between aerosol marketer and aerosol contract loader as perhaps exists in the United States. Furthermore, some fillers overseas have gone a step further and are even manufacturing containers, valves or both, besides filling and marketing pressurized products. One day someone may even decide to produce propellant!

It would seem, however, that the contract filler abroad will never quite reach the size or obtain the dominant position which many such companies have in the United States. There are three factors upon which this view is based. First, many firms abroad seem to have an inherent aversion to letting others do a job for which they will ultimately have to carry the responsibility in the eyes of the customer and consumer. In many areas the popularity of a product is based more upon the quality and length of time it has been sold ("what was good enough for my grandfather ..."), than on a constant advertising barrage. This great emphasis upon maintaining quality and uniformity of a product reflects itself in the desire to control all manufacturing, so to speak, under one roof.

Secondly, there is a strong tendency not to let outsiders get a look into one's own operations or work with one's own "secret" formulations. Loyalty of an employee to his employer is expected without question—there is very little job switching or pirating of personnel—often the company with whom one starts is the company with whom one dies. But an outside contractor is always considered as a potential fountainhead of confidential information to one's competitors.

Thirdly, the cost of labor is much less than in the United States. Idle hands—when an aerosol line is not in production—are not nearly so costly, and in most instances can be diverted to other work within the usually substantial manufacturing operations for non-pressurized products. This low cost of labor, coupled with smaller production runs, also permits less expensive equipment to be used, lowering capital investment in setting up one's own pressure filling line.

These factors all create a trend toward establishing one's own filling plant rather than contracting the aerosol loading operation. Probably an aerosol volume of something under two million units of *all* types of products would be justification for an individual foreign firm to load themselves.

No Substitute for Aerosol Experience

Francis A. Mina
Technical Director
Lodes Aerosol Consultants
New York, N. Y.

UTILIZATION of the services of reputable aerosol custom fillers offers a number of distinct advantages that should be evaluated carefully.

In considering the possibility of self-filling, the aerosol marketer naturally will consider the length of time required to amortize his capital investment in equipment. However, the technological skill and resourcefulness of established custom fillers should be considered a prime factor.

The marketer should also consider whether he has available a technical staff with the specialized training necessary to keep "on stream"; to trouble-shoot when necessary, and to develop new marketable aerosol products so as to minimize idle time of his filling line.

Aerosol marketers are continually asking: "How many units must I expect to sell before it pays me to do my own filling?" We do not believe that any generalizations can be made regarding the point at which it will pay the marketer to do his own filling. In some instances it might pay him to establish his own facilities for as few as 100,000 units of a highly specialized type product; yet it might be uneconomical to establish such facilities for a product running into several million units annually. Each product and program must be evaluated and considered on its own basis. Technical peculiarities, quality standards, product uniqueness, etc. are of prime concern, and often more important than economies.

In this connection perhaps as in no other industry is the need required for experienced judgment, ability and guidance to avoid the costly mistakes of the past and insure a profitable future.

Thus, it is necessary for the aerosol marketer to consider:

1. Availability of trained staff to insure
   a. minimum operating difficulties
   b. maximum quality control
   c. continued research and development for new aerosol products
   d. minimal idle time for equipment
2. Amortization of capital investment on specialized equipment.
3. Peculiarities of product.

By weighing carefully the above factors, among others, the aerosol marketer can perhaps avoid going into what could be a costly "do-it-yourself" error.

Advantages of Using A Contract Packager

by A. S. Pero

Fluid Chemical Co.
Newark, N. J.

1. *Research & Development Advantages*
   a. Can draw from lab personnel already experienced in aerosols.
   b. Developments by fillers, either directly or in cooperation with other suppliers, are available promptly to marketers.
   c. Prevents added load being placed on marketers lab facilities.
   d. Reduces marketer's outlay for research & development.
2. *Production Advantages*
   a. Can select latest and best equipment available for particular job required.
   b. Two or more products can be run simultaneously.
   c. Contract packagers offer facilities to cope with seasonal demands, or unexpected market fluctuations either of higher or lower volume than anticipated.
   d. Personnel of long,varied, & impartial experience available for quality control.
   e. Marketer can ask for, and often gets, tighter specs. on his product.
   f. Supplier problems are handled by the filler.
   g. Can eliminate or minimize labor-management problems.
3. *Service Advantages*
   a. Marketer can warehouse both raw and finished materials, often at no charge, on filler's premises.
   b. Filler's trucking facilities can be used for drop shipments, emergency services, etc.
   c. Marketers can draw on know-how and information sometimes not available within his own organization.
4. *Economic Advantages*
   a. No money outlay for equipment and maintenance, plant building or expansion, or personnel and training of same.
   b. A contract packager is actually a co-op manufacturer who divides his labor, overhead, etc. among a wide group of customers and products.
   c. Working capital is conserved on material purchased by filler until product is completed.
   d. Material purchases are often less, due to filler's volume buying.
   e. Lowest costs on final product can be obtained thru competitive bidding.
   f. Use of strategically located fillers can offer substantially lower shipping costs when products are to be nationally distributed.

How high a volume of product must an aerosol marketer be turning out before it pays him to consider doing his own filling?

Actually product volume is relatively unimportant in itself. More important is to seriously study the overall advantages a good filler has to offer vs. the overall advantages of the marketer doing his own work. Once this is determined, a further evaluation is needed on the aerosol product or products to be manufactured.

Is the product to be a low profit, highly competitive one? In this case a larger volume will be needed to justify the total expenditure involved. Or is the product a high profit one, in a non competitive line? In the latter, a lesser volume might justify doing one's own filling.

In general, a careful analysis of all factors involved by the marketer, in the light of his own capacities and business interests, should provide him with a satisfactory answer. A survey of the aerosol field today clearly indicates that most marketers have already decided it is to their advantage to have their aerosol lines produced by contract packagers. The aerosol filling industry is today so competitive that the margin above direct labor is small enough to discourage not only the marketer's equipment plan, but also new competitive contract packagers as well.

The Security Factor

by Herbert Fine

president
Plasti-Kote, Inc.,
Cleveland

THE LARGE package custom filler today can fill individual products of big runs more economically and with greater security than the individual manufacturer who considers marketing an aerosol product and setting up a production packaging line of his own.

On the other hand, manufacturers who have a wide variety of products will usually find it an advantage to package for themselves because this gives greatest possible flexibility. It also eliminates necessity for long runs and heavy inventory. Basically, if you have one, two, or three items, it pays to let the custom packager do

(*Continued on Page* 89)

CSMA

Holds Midyear Meeting at Chicago's Drake Hotel

THE program is set, the speakers are primed, and the gavel is poised as members assemble in Chicago for the 43rd midyear meeting of the Chemical Specialties Manufacturers Association May 20-22. The meeting opens at the Drake Hotel on Monday, and, as at previous meetings, the Aerosol Division will occupy an important share of the spotlight.

Though the convention opens formally on the morning of Tuesday, May 21, with four of the divisions holding simultaneous sessions, various committees of the Aerosol Division will meet on Monday, as well as the CSMA's board of governors and administrative committees. A new chairman, vice chairman and members of the Aerosol Division's administrative committee are to be elected, to officially take office early in 1958.

Nominations for the Aerosol Division (to be acted upon by the membership at the first session) include W. Earl Graham (chairman), Crown Cork & Seal Co.,; W. E. Baulieu (vice chairman), Bridgeport Brass Co.; Charles E. Beach, John C. Stalfort & Sons, Inc.; William T. Egan, Colgate-Palmolive Co.; and E. J. McKernan, Sequist Manufacturing Corp.

The Wednesday afternoon session will be a joint symposium of the Aerosol and Insecticide Divisions, celebrating the 10th anniversary of the Aerosol Division. Speakers will include experts in all principal fields of the industry.

Among the features of the tentative formal schedule for the Aerosol Division will be:

Tuesday Morning, May 21

Address
Charles E. Beach, chairman, Aerosol Division, John C. Stalfort & Sons, Baltimore

Nominating Committee's Report
R. W. Svendsen, Chase Products Co., Broadview, Ill.

Election of Officers and Administrative Committee

"Manufacture and Use of Aerosol Cans in Europe"
A. Taranger, Aluminium Union Ltd., Montreal

"Hydrocarbon Propellants"
Lyle D. Goodhue, Phillips Petroleum Co., Bartlesville, Okla.

"Problems in Producing Non-Aerated Aerosols"
W. E. Graham and G. A. Klitsch, Crown Cork & Seal Co., Can Division, Philadelphia

Report on Annual Aerosol Product Survey
Frederick G. Lodes, Lodes Aerosol Consultants, Inc., New York

Wednesday Afternoon, May 22

(Joint Meeting Aerosol and Insecticide Divisions)

"Aerosol Containers—1947, Present and Future"
Jack Heinen, Continental Can Co., Chicago

"Aerosol Propellants—1947, Present and Future"
Winston H. Reed, Reed Laboratories, Huntington, Conn.

"Aerosol Valves — 1947, Present and Future"
S. Jack Campbell, Continental Filling Corp., Danville, Ill.

"Aerosol Filling — 1947, Present and Future"
Russell P. McGhie, Colgate-Palmolive Co., New York

"Aerosol Marketing — 1947, Pres-and Future"
Stewart Watson, McCann-Erickson Advertising Agency, New York

"Customer Viewpoint Toward Aerosols — 1947, Present and Future"
A speaker from the Good Housekeeping Institute, New York

"Insecticide Formulas—1947, Present and Future"
R. A. Fulton, U.S.D.A., Entomological Research Branch, Beltsville, Md.

The morning of Wednesday, May 22, will be devoted to a general session of the CSMA, and group luncheons are scheduled for Tuesday and Wednesday. Final event on the meeting's schedule is the evening cocktail party and banquet on Wednesday, May 22.

The Honorable Thomas B. Curtis, Congressional representative from Missouri and author of the "Federal Hazardous Substances Act," will be the featured speaker at the Tuesday luncheon. At the general session Wednesday morning D. George Buso, International Business Machines Corp., New York, will be the speaker, and Gene Flack, director of advertising, Sunshine Biscuits, Inc., will speak at the Wednesday luncheon.★

Close-up of the assembly unit. All parts of the six-part valve are fed into the machine automatically.

Sun Tube's Assembly

Automation to

A COMPLETELY automatic valve assembly machine that could make obsolete the conventional in-line production of aerosol valves was announced last month by Sun Tube Corp., Hillside, N.J., a subsidiary of the American Can Co. This high-speed unit, coupled with the company's philosophy of strict quality control and the issuance of complete specifications on the valve and each of its components, is expected to project Sun Tube into a position of considerable importance in the aerosol valve industry.

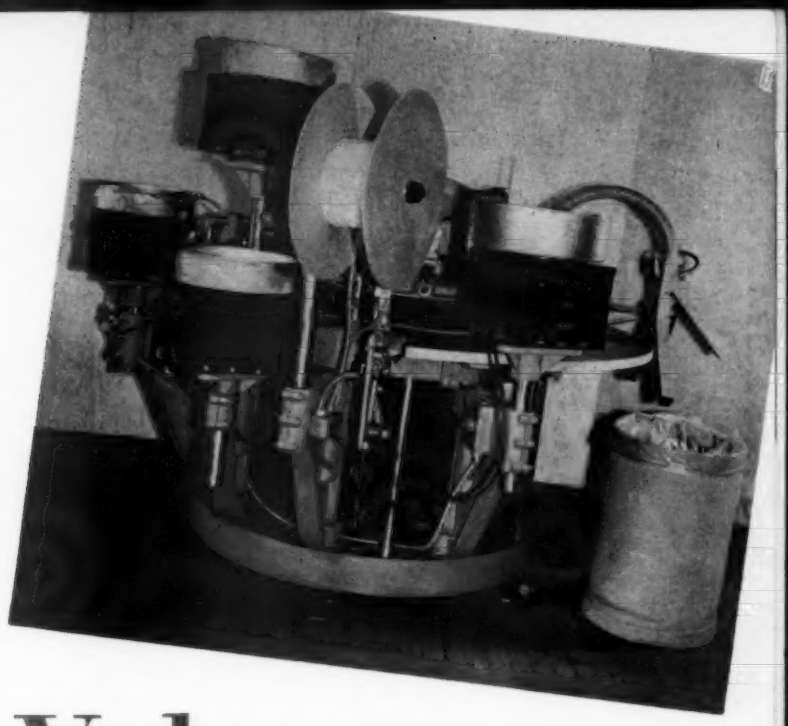
The revolutionary machine, just removed from the "secret" category, is shown photographed on these pages. A compact unit approximately six feet in diameter and five feet high, it is operated by compressed air and electrical power and utilizes circulatory vibrator feeders at each component assembly point. The unit operates much like a turn table, starting with the placement of a valve body into a special retainer cup, moving through various component assembly points, to the final ejection of the finished electronically inspected and counted valves.

At each of these "stations" (they cannot be thought of as individual machines, being actually integrated into the overall unit and operating off one power and control source) another component is automatically assembled into the valve, which is seated firmly on the rotating table. At each "station" the dimensions and fit of each of the installed components are measured automatically by the machine. If error is detected, the machine "remembers," allowing the defective valve to proceed along to the end of the assembly line, where an alerted by-pass device intercepts and deposits it in a separate receptacle.

This unique memory device is one of the more remarkable features of Sun Tube's new machine, as it allows the machine to continue operating at top speed, eliminating the necessity of shutdown to extract any defective valve. The device works fairly simply. If the defect occurs and is detected, for instance, at the fourth "station" from the end of the line, then that valve proceeds to the end, is intercepted and deposited in the special reject container.

ACCORDING TO Claude L. "Bud" Alexander, Sun Tube general sales manager, and Rudolph Cerny, aerosol valve-sales engineer, this machine is "about as close to the ultimate in design as one can get." Mr. Alexander notes that with the development stage now past, Sun Tube is in "full production" with its new machines.

Sun Tube was founded originally in 1926 to make collapsible tubes for such products as toothpaste; and for the past ten years, its management has strived for automation as a solution to the problem of increasing productivity and quality, while at the same time creating new opportunities and higher wages for its employees. It has long been felt by Sun Tube that quality control is considerably less complicated and more exact where well designed automatic machines can eliminate the possibility of



Completely automatic and highly compact, the unit is contained in a 20-square foot area.

Unit Brings . . . .

Aerosol Valves

human error or lapse either through inattention or fatigue.

This automation concept is currently being carried out wherever possible in the company operations, including those at the recently built plant at Washington, N. J., which is devoted to the manufacture of collapsible metal tubes and impact extrusions. Such machinery as that for making plastic valve components, capping for the collapsible tubes, and even the extrusion equipment for hammering out the tubes and impact extrusions, has been added to the company's list of equipment that has been modified or redesigned to be almost completely automatic.

The development of the aerosol valve assembly unit, according to "Bud" Alexander, followed the same pattern of automation development established in the company's other divisions — a pattern of inter-departmental cooperation. As Mr. Alexander explains it, "The development of the unit is the result of the close liaison maintained between our design and engineering departments. They worked together in conceiving and building this unit."

The valve assembly unit is only one part of Sun Tube's bid for an increased share of the aerosol valve market.

Another is quality control, considered so important a function of the company's production methods that a special laboratory has been set up to insure control throughout the production operation. This laboratory is equipped with the latest devices, including a comparator — an instrument looking like a fluoroscope which enables inspectors to examine magnified valves and valve components for dimensional tolerances and defects.

On this phase of the company's activities, Mr. Cerny declares, "We at Sun Tube feel that quality control is a major selling point. It increases the profit of the aerosol packager because it eliminates the need for much of the inspection ordinarily required by his own personnel. Also, in the long run, strict control by the manufacturer tends to give better assurance of quality control in the finished aerosol product, since the chance of any slight defect slipping by an inspector is further reduced."

The third major selling point Sun Tube expects to make use of is the issuance of complete specification sheets containing the dimensions and tolerances of the valves and valve components. For the standard Sun Tube valve, for instance, three pages of specification facts and figures are furnished the packager. It is felt that this too will eliminate much of the "extra" work for the filler — this time in the field of duplicated research.

Sun Tube's varied valve line currently includes:

1. A basic valve design, adaptable for both spray and foam aerosol products.
2. Two foam actuator designs, one a rigid plastic type and the other a unique flexible actuator which completely covers the standard one inch mounting cup.

(*Continued on Page* 89)

POLY WAX
FOAM-EZE
WOOD POLISH
FIRE-CHE
SPRAY-EZE
FIRE EXTINGUISHER

QUICK! cool and pamper tired burning feet with
Max Factor's
FOOT LIGHT
NEW instant cooling foot spray that even works right through your stockings!
1.25
FOOT LIGHT
FOOT LIGHT
FOOT LIGHT
FOOT LIGHT
contains a DEODORANT to help keep feet sweet!
use it: at home... at work... at play!

Coed
CORKETTE
LEATHER CLEANER
ALSO IDEAL FOR BAMBOO, SUEDE-TYPE, AND OTHER SIMILAR LEATHERS
NON-INFLAMMABLE

New Products and Packages

• **MIST TOP,** a new one-piece aerosol dispensing unit combining valve and cap, has been introduced by the Valve Corp. of America, Bridgeport, to eliminate the need for a removable protective cover. Designed primarily for cosmetic, toiletry, and pharmaceutical applications, the container shown is being marketed by Elizabeth Arden, New York.

• **POLYWAX,** a foam wood polish, and **FIRE-CHEK,** a fire extinguisher, are among the new products recently introduced by the Kensol Corp., Allentown, Pa. Both products are packaged in Crown containers and retail for $1.89. The wood polish, packaged in a 12-ounce container, cleans, polishes, and waxes in one operation. The fire extinguisher is in a 14-ounce container.

• The **EMSON METERED VALVE** was introduced last month in a radical new container for oral dispensing of pharmaceuticals. Metered valve and container are marketed as one unit, and the valve, said to be the only metered valve able to be pressure filled is capable of delivering exact dosage sprays of from 50 mg. to three grams.

• **FOOT LIGHT,** is a new foot relief product of Max Factor & Co., Hollywood, Calif. To go on sale May 30 (and timed to reach the counters before the summer heat) the five-ounce container will retail at $1.25 per can. It contains hexachlorophene plus a special balm formulation.

• **COED SPRAY CORKETTE** leather cleaner is a new product of Vangard Chemical Corp., St. Louis. Filled by Plaze, Inc., the package is equipped with a Precision Valve and a Crown Can and uses "Genetron" propellant.

• **JET-SPRAY BON AMI,** in a new French-English label, was introduced in Canada last month. "Push-button cleaner," impossible to translate literally into French, becomes "nettoyant a vaporizer" (i.e., "a cleaner in a container that is used as an atomizer.").

Techniques of Pressure Filling

by James Gottlieb
J G Machine Works

DURING the past few years there have been a great number of articles, some informative and some repetitive, covering the chemistry and history of package development, both technically and from the standpoint of the layman. There has been a need to explain the field of aerosol machinery equally well.

Too often organizations venture into a new field, only to discover some totally unexpected complication, which has not been accounted for budgetwise. It is true that most of the larger companies will have at their disposal shop and engineering personnel necessary to surmount these "blind" obstacles, but there *does* exist the need to become better acquainted with the machinery side of the industry. By availing himself of pertinent publications and articles, by studying new equipment catalogues and advertisements, and by examining the equipment itself, anyone well versed in the industry can soon become an "authority" of sorts.

Cold filling versus pressure filling need not be debated unless one wishes to be involved in a stand-off, drag-out, no decision argument. Any long range examination of the aerosol industry reveals that both methods will be with us as long as there are aerosols. Each method holds answers to distinct and separate demands imposed by the chemistry or the economics involved.

The aim of this particular article is to attempt to simplify some of the techniques of pressure filling, so that some of the heretofore unforeseen costs can be understood. Our experience in air, hydraulics, and injection filling have all been drawn upon.

In a metropolitan area the packager is often beset by regulations — some aimed at saving water and other at safety. In the use of air as a source of power, 100 pounds p.s.i. is a good average pressure; and, so far as we know to date, it is an acceptable pressure even in New York City. Fortunately higher pressures are not necessary.

THE obvious question will arise: How does the packager determine how much air he needs? To get an answer he must investigate his machinery to determine the sizes and number of air-operated units that are included. Next he must calculate the displacement of each device through its total number of operations per minute in cubic feet. The air in a cylinder is displaced once on the forward stroke and once on the return stroke. Thus the volume of a cylinder in cubic feet, multiplied by two and then multiplied by the number of times it cycles per minute, will give the cubic foot displacement per minute.

It should be kept in mind, however, that since air is compressible, the higher the pressure the more free air has to be collected per minute by the compressor. To indicate the strain on the machine as pressure increases, the cubic feet of free air for each cubic foot of compressed air should be noted at the following pressures:

at	40—	3.7	cubic feet
	50—	5.2	" "
	100—	7.8	" "
	150—	11.5	" "

These figures are given not to prove that the compressor should not be set at higher than 100 p.s.i., but rather to show why these devices should not be set higher than is absolutely necessary.

In order not to overtax the power supply, the cubic displacement calculations for the full minute of operation should be followed. This figure can be used as the basis for choosing a compressor. Falling back on sample estimating, 100 p.s.i. may be used as the pressure for which the compressor is rated to deliver the packager's requirements.

If possible the intake of the compressor should be outside the building. Air should be filtered at the source and cooled through a good-sized after-cooler placed between the compressor and the receiver. The receiver can be automatically dripped to condense the water, and this condensation piped upward in pipes large enough to reduce air velocity so that the additional condensate will drip back to the receiver. Wherever possible it is advisable to pitch the main air feed pipe to a point where it can be drained, and further, to take each branch from it upward before the run to the individual machine it feeds. Filtering, pressure regulating, and oiling the air must be done at each machine or group of machines using the same pressure.

(*Continued on Page* 92)

NYLON

Opens a New Era in Aerosol Containers

by ROBERT ABPLANALP and JOSEPH PIZZURO
Precision Valve Corp.

A NEW concept in packaging, the moderate pressure aerosol, came into being after the close of World War II. Its growth has reached fantastic proportions, and attempts have been made to package every conceivable type of item in this highly efficient, easy to use manner. Consumer acceptance of aerosol packaging has forced the new industry to expand both its production and research facilities to keep abreast of requirements.

One of the pressing needs of the industry has been a suitable container for packaging of anti-perspirants, deodorants, colognes, and other products causing corrosion of metals. This material would require an unusual combination of characteristics. It would have to be rigid, non-permeable, light-weight, of low cost, and of course, non-corrosive as well. Research was undertaken on the two most likely materials, glass and the heterogeneous group headed "plastics." Glass was the most likely contender since it fulfilled all the requirements. In addition, however, one of its major characteristics offered a serious drawback; the potential danger of breakage. The container being under pressure constitutes a serious hazard of flying particles. This hazard has been reduced in two ways; first by the reduction of the pressures in the container to 12 to 15 psig through the use of Freon 114, and secondly, by coating the outer surface of the glass container with a protective plastic which allows pressures of 15 to 25 psig to be used. Both of these methods have been used successfully for the past two years.

Plastics, however, seemed to offer the broadest field for further research, being light in weight, inert and lacking the potential breakage hazard. In 1953, Precision Valve Corporation started investigations in this field, despite the lack of encouragement by the manufacturers of the plastic material proposed for use. Injection molding was picked as the manufacturing method for practical reasons. Nylon was selected as the material, because of its rigidity, light weight and high resistance to chemical attack. These features appeared to outweigh the relatively high cost of the raw material, particularly since it was felt that a nylon container could be constructed with a wall thickness of only .025", thus reducing the quantity of raw material required.

The specific nylon chosen was "Zytel 101." Nylon was originally a Dupont trade name for the polyamide group of plastic resins. Since then Nylon has become the generic term for this group and Dupont has created the new trade name "Zytel" to replace it. "Zytel 101" is Dupont's designation for an injection molded grade of nylon, while "Zytel 42" is their designation for the extrusion molded grade. In essence these two grades are the same with the exception of their viscosity, Zytel 42 having the higher viscosity and therefore a slightly higher molecular weight.

THE design of the container became the next consideration, and to expedite the research a single shape was decided upon. This design had to be aesthetic as well as structurally sound and practical for molding. The most acceptable design was tubular, with an open bottom and provision for center extrusion at the top to accommodate the valve assembly.

The problems at this stage of the development were manifold and disheartening. The first attempts at molding containers failed. But the failures were the starting point for a long series of mold modifications, temperature, pressure and cycling changes which eventually produced correct cavity fillout. When the first group of containers were successfully completed and pressure packed, it was found that structural modifications were necessary, since there was, among other things, excessive distortion. The valve assembly as well as the overall appearance was affected by the distortion. At the same time a solution to the problem of how to assemble the nylon bottom to the container had to be worked out.

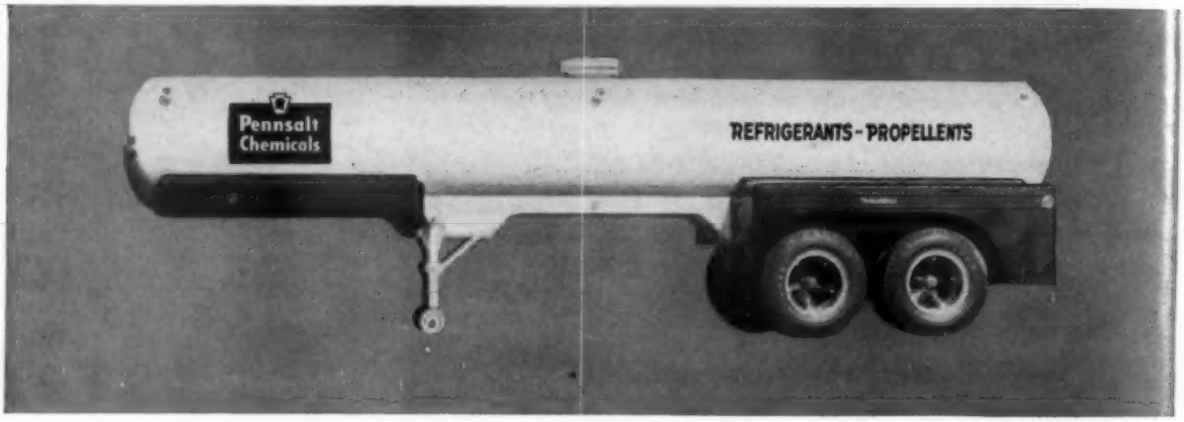
MANY months were spent in attempts to assemble bottom and container. Heat sealing methods were developed and discarded because in every case these closures were neither positive nor stable. Finally, a steel ferrule, which acts as a clamp for securing the bottom to the container, was employed. Since the steel is outside the container, it does not come in contact with the contents and its corrosive characteristics do not come into play. It is also a highly decorative feature since it can be plated in a variety of colors to complement the labeling and enhance the overall appearance. The ferrule has other practical advantages in that it is magnetic and eliminates the requirement for carrying pucks while leak testing in the water bath.

Now, Precision Valve was ready for the testing procedures. How much pressure could this container hold? Was there a problem of propellant, product or perfume permeability with nylon? What was the product compatibility?

First, an attempt was made to determine pressures. A fixed propellant blend was used and the containers were stored at varying oven temper-

BUY WITH CONFIDENCE . . . USE WITH EASE

ISOTRON controlled-process propellents



With individualized aerosol customer service

ISOTRON* propellents are now available from Pennsalt's new, modern ISOTRON plant in Calvert City, Kentucky, and from a blending plant at Cornwells Heights, Pennsylvania.

Pennsalt rigidly controls ISOTRON production from raw materials to final packing. A pioneer in fluorine chemistry, Pennsalt offers you not only the finest quality fluorinated propellents but also individualized aerosol customer service to help you benefit most from the new ISOTRON line.

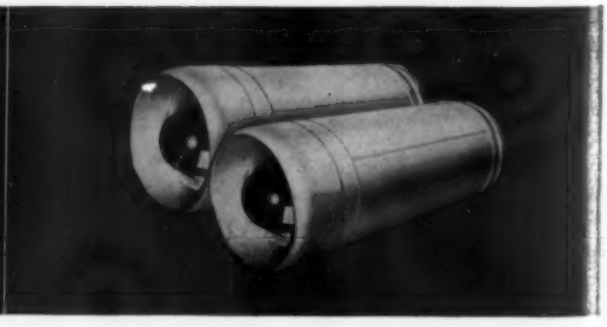
Learn how ISOTRON and Pennsalt service fit into your aerosol plans. Write Isotron Chemicals Dept. 495.

*ISOTRON is a trade-mark of Pennsalt Chemicals Corporation

ISOTRON THE KEY TO MODERN LIVING

Pennsalt Chemicals

PENNSALT CHEMICALS CORPORATION
3 PENN CENTER, PHILADELPHIA 2, PA.



atures. They were kept at each temperature for a period of 24 hours, then raised to the next temperature. It was discovered that containers with a wall thickness of .030" could withstand pressures of 170 psig while in an ambient of 160°F.

For permeability, a new set of testing methods had to be developed, since preliminary trials showed that ambient conditions greatly affected results. For example, when anhydrous alcohol was placed in the container, its weight variations were directly dependent on the outside humidity. We wanted our tests to give a true relationship between the ingredient and the nylon container not influenced by the ambient. In addition, we wanted to discover weight variations that might be incurred under field storage conditions. Therefore, two separate methods of testing had to be worked out.

First, a true relationship test was accomplished by storing the containers to be tested in dessicators containing silica gel, thus assuring the absence of moisture. We called these the "dessicator tests."

Second, field condition tests were made by placing the test units on window shelves where they would be subject to the widest variety of temperature and humidity. The actual recordings indicated a temperature variation from 50°F. to 110°F. and a humidity variation of 50% R.H. to 90% R.H.

The initial tests on containers with .030" wall thickness showed that the permeability of water based products such as shave cream was high, approximately 24 grams per year being lost. This result was expected to a certain degree because of the known effects of water on nylon. The alcohol based products, such as hair lacquers and colognes, turned out very well. They showed permeability losses of about one gram a year. A very important test was the permeation tests of perfume oils. Samples of containers were sent to Givaudan-Delawanna Inc., where they were packaged with various products containing perfume odors of all types and degree. One year results indicated no evident loss of perfume odors or parts thereof.

THE results therefore indicated that the containers were well suited for aerosols, with the exception of those which were water-based or partially water-based. Since water based products are a large portion of the field for which the container was being developed (shave creams, hand lotions, shampoos, etc.) our next step was to cut down the water permeability. Theoretically this could be accomplished by increasing the wall thickness, but this would place the container in a non-competitive price class, because of high raw material costs. Chemical treatment of the container was the next step. Treatments with ingredients such as glycerine, glycerine and water, mineral oil, mineral oil and water, glycols, stearates and many others were attempted, all in the hope of impregnating the container walls with some ingredient which would tend to slow down the water permeation to an acceptable degree. All failed to reduce permeability sufficiently to be practical in use. Other methods such as vacuum metal plating and lining the walls with non-permeable materials were considered, but again abandoned due to the prohibitive costs.

At this point it was necessary to investigate the possibility of using a different plastic material for the container. It was discovered that Zytel 31 was much less affected by water than Zytel 101. Containers were then made of Zytel 31, packed with water-based products and tested. The tests were made with shave cream and shampoo packed in a 90% concentrate, 10% propellant ratio. Three different propellant combinations were used:

(1) Freon 12 (40%) Freon 114 (60%)
(2) Freon 12 (30%) Freon 114 (70%)
(3) Freon 12 (20%) Freon 114 (80%)

These test units were stored on window shelves, with one complete set being subjected to higher temperatures than the other. The results are shown in Table I. They indicate that higher pressures, caused by the propellant or increased heat area are direct cause of increased permeation.

Although "Zytel 31" is less affected by water than 101, it is more affected by alcohol. Subsequent tests with combinations of water and alcohol showed an acceptable range of permeability, but there was a serious distortion in the Zytel 31.

With the problem of high water permeability there developed the serious problem of sidewall distortion. Changes in sidewall construction were made and at the same time the use of fiberglass-filled nylon was investigated to remedy the distortion problem. After many months of ex-

TABLE I

Product	% Freon 114	% Freon 12	Zytel	Temperature Degrees F.	Weight Losses 1 Mo.	2 Mos.	3 Mos.	6 Mos.
Shave Cream	60	40	31	Low	0.26g.	0.74g.	0.99g.	1.58g.
Shave Cream	60	40	31	High	0.34	0.98	1.26	1.88
Shave Cream	70	30	31	Low	0.25	0.73	0.97	1.56
Shave Cream	70	30	31	High	0.34	0.96	1.26	1.94
Shave Cream	80	20	31	Low	0.22	0.67	0.91	1.47
Shave Cream	80	20	31	High	0.31	0.86	1.14	1.73
Shave Cream	60	40	101	Low	1.89	4.83	8.68	10.15
Shave Cream	60	40	101	High	2.36	6.16	9.64	11.33
Shave Cream	70	30	101	Low	1.95	4.67	8.64	10.09
Shave Cream	70	30	101	High	2.26	5.80	9.53	11.33
Shave Cream	80	20	101	Low	1.77	4.82	8.11	9.49
Shave Cream	80	20	101	High	2.06	5.63	9.22	10.57
Shampoo	90	10	31	Low	0.32	1.04	1.96	2.42
Shampoo	90	10	31	High	0.48	1.47	2.62	3.19
Shampoo	80	20	31	Low	0.39	1.15	2.12	2.62
Shampoo	80	20	31	High	0.56	1.63	2.86	3.47
Shampoo	70	30	31	Low	0.34	1.09	2.04	2.28
Shampoo	70	30	31	High	0.55	2.66	2.92	3.52
Shampoo	90	10	101	Low	1.96	5.41	9.73	11.61
Shampoo	90	10	101	High	2.56	7.18	12.15	13.92
Shampoo	80	20	101	Low	2.03	5.85	9.79	12.24
Shampoo	80	20	101	High	2.74	7.64	12.67	14.98
Shampoo	70	30	101	Low	2.21	6.32	10.30	12.79
Shampoo	70	30	101	High	2.94	7.99	13.55	16.06

Comparison of Aerosol Shave Cream and Shampoo Packed in "Zytel 101" and "Zytel 31" Containers of 0.030" Wall Thickness.

perimentation it was decided to increase the sidewall thickness to .050" in spite of the higher costs resulting from the increase in raw materials required. Subsequently there was a price decrease in "Zytel," which fortunately offset the increased quantity of material.

The initial results with .050" wall thickness showed great promise. They indicated a considerable reduction in permeability as well as a tremendous reduction in distortion. Various aerosol products were packaged in the new container and run through the field condition tests. The one year results are indicated in Table II. In addition, field condition tests were started for various propellants. These results are illustrated in Table III. Dessicator tests which were run simultaneously indicated the same trend after one year's testing as those results listed. As shown, water permeation through the thicker wall was greatly reduced. Further there was very slight, if any, side wall distortion. The new containers were also found to be much more shock proof. Results of tests run independently by firms interested in merchandising this type container in general corroborate the foregoing information.

THE overall results gained from the Precision Valve Corporation's tests show that containers of nylon are practical for the pressure packaging of many products. We feel that it can be concluded that containers of "Zytel 101" are best suited for alcohol-based products, but can also be successfully used with water-based products, or water and alcohol products. However, if the particular water-based product appears to give excessive losses, "Zytel 31" can be successfully used as the container material.

TABLE II

Product	Formula	Weight Losses 1 Mo.	2 Mos.	3 Mos.	6 Mos.	1 Yr.
Shave Cream	90% Concentrate 10% Freon 12-114 (40-60)	0.22g.	0.77g.	1.32g.	4.21g.	8.13g.
Shampoo	90% Concentrate 10% Freon 12-114 (40-60)	0.13	0.55	1.04	4.25	8.87
Hair Lacquer	30% Concentrate 70% Freon 11-12 (65-35)	0.08	0.10	0.09	+0.06	0.29
Anhydrous Alcohol Cologne	50% Concentrate 50% Genetron 101	0.09	0.11	0.09	+0.11	+0.10
Anhydrous Alcohol Cologne	50% Concentrate 50% Freon 12-114 (20-80)	0.05	0.05	0.01	+0.35	+0.44
95% Alcohol Cologne	50% Concentrate 50% Freon 12-114 (10-90)	0.05	0.10	0.12	0.87	3.00
Water-Alcohol Deodorant Aluminum	70% Concentrate 30% Genetron 101-320 (30-70)	0.05	0.09	0.12	0.79	2.85
Chlorohydrol Antiperspirant	70% Concentrate 30% Freon 12-114 (40-60)	0.04	0.05	0.08	0.10	2.58
Room Deodorant	25% Concentrate Freon 1-12 (50-50)	0.05	0.04	0.06	0.12	0.16
Control		0.08	0.08	0.07	+0.01	0.07

Field Condition Test Results of Various Aerosol Products Packed in 0.050" Walled Zytel 101 Containers

TABLE III

Ingredient	Weight Losses 1 Month	2 Months	3 Months	6 Months	1 Year
Freon 11	0.08g.	0.14g.	0.13g.	0.15g.	0.38g.
Freon 12	0.10	0.14	0.15	0.03	0.27
Freon 11-12 (50-50)	0.06	0.10	0.11	0.15	0.23
Freon 114	0.04	0.08	0.08	0.04	0.20
Freon 12-114 (40-60)	0.04	0.06	0.05	+0.09	0.03
Genetron 101	0.07	0.12	0.14	0.14	0.30
Genetron 226	0.04	0.07	0.07	0.00	0.11
Genetron 320	0.05	0.07	0.07	0.05	0.25
Genetron 226-320 (50-50)	0.09	0.15	0.14	0.12	0.30
Control	0.05	0.08	0.07	0.05	0.06

Field Condition Test Results of Propellants Packed in 0.050" Walled Zytel 101 Containers

An exhibition demonstrating the striking practical aspects of manufacturing containers by the process of injection molding, was given recently at the Packaging Exposition in Chicago. While the containers involved were styrene ice cream containers and not pressure vessels, the demonstration was still outstanding inasmuch as the same equipment demonstrated can be readily adapted to produce nylon pressure containers at a rate of 40 cans per minute from a single four cavity mold. This clearly defines the economic advantages of this type of production system. The Precision Valve Corporation originally undertook this development with two objectives in view:

(1) The successful development of this type of container would certainly broaden the valve market.

(2) It was possible that Precision, with a container of its own manufacture, could supply the demand for same in the industry.

Both these objectives have been actively pursued during the past four years; however, it has recently been decided that the Precision Valve Corporation is ill equipped (because of the pressing requirements of expansion in the valve field) to devote further facilities to a growing container market. Therefore, the second objective has been modified to one which might be written as follows:

Precision is prepared to continue its present development to the point of commercial production of up to 75M containers per day. However, it is proposed to do this only as a pilot operation for purposes of demonstration to other manufacturers interested in the plastic pressure container field. Precision's strongest interest at present is to assist these same manufacturers in terms of information on molding procedures, research data, etc., to develop as rapidly as possible actual commercial production facilities for the manufacture of this type container with licensing arrangements under PVC patents.★

Author's Note: Precision Valve Corporation will be happy to make the complete results of their tests and research available to those concerns seriously interested in the pursuit of this project.

Gibberellic Acid

A new plant growth stimulant excites immediate interest in the pressurized packaging field

GIBBERELLIC acid, a new plant growth stimulant, is attracting considerable interest in the aerosol industry—despite the fact that the product is comparatively so new and is currently available in only small commercial quantities. At the time of this writing, however, at least two companies have already begun production of aerosols containing gibberellic acids, both of which are aimed, understandably, at the "home" or "back yard" garden market.

What exactly *is* gibberellic acid? Is it something from the world of science fiction? Just another "miracle" product from the pages of the Sunday garden supplements? or does it actually work, and how will it affect plants on which it is applied? These and many more questions immediately come to mind.

Gibberellic acid has attracted such considerable attention (even excitement) in the horticultural field mostly because of its spectacular effects on growing plants. It stimulates the elongation of stems, petioles, and to a somewhat lesser degree, leaf blades. These effects are accomplished by a linear extension of the individual cells, rather than by an increase in cell division, and the total effect on the growing plant is readily apparent to the observer. The effect, when the material is applied to young plants, is considerably more marked in the above-ground portions of the plant than in the root area. It often produces marked increases in both fresh and dry weight, of the plant, though a large portion of this effect must be attributed to carbon assimilation, as well as to some increase in plant ash.

In such crops as wheat and peas researchers have found an increase in the total soluble carbohydrate, as well as in the glucose fraction. Gibberellic acid hastens the germination of certain seeds, and substitutes for the exposure to red light required for germination of lettuce seed. Treatment of seeds with G. A. hastens the emergence of seedlings. However, the flowering of some plants was retarded and in some it was hastened (depending on the species) so that perhaps there may be some drawbacks to indiscriminate use.

The list continues *ad infinitum*. This remarkable substance seems to affect not only growing plants and seeds, but bulbs, cut plants, dormancy of potatoes, etc. It even gives evidence of lessening transplanting shock, advancing flowering time, and improving fruit set. All this, and yet plant scientists are still not sure about the mechanics it uses to bring about these effects!

THE advertising possibilities for such a product are to be envied. Plant Products Corp., Blue Point, L. I., probably the first company to seize upon the idea for an aerosol G. A. product, (in banner-head advertising) claims: "Growth Stimulant Increases Plant Size Up to Three Times Over Normal." The company's "partial" list of plants which respond to its product is sure to catch the eye of nearly every single gardener and flower-pot farmer:

Flowers

African violet, geranium, stock, rose, snapdragon, ageratum, dahlia, petunia, salvia, and poinsettia.

Ornamentals

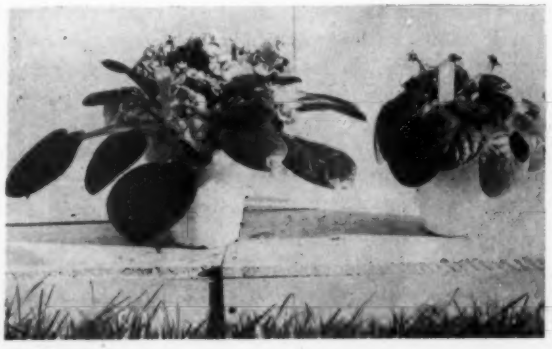
Hydrangea, rhododendron, holly, ivy, crassula, peperonia, sedum, chrysanthemum, orchid, and gladiolus.

Trees

Orange, English boxwood, red leaf and sugar maple, willow oak, Virginia and loblolly pine, poplar, white spruce, tulip tree.

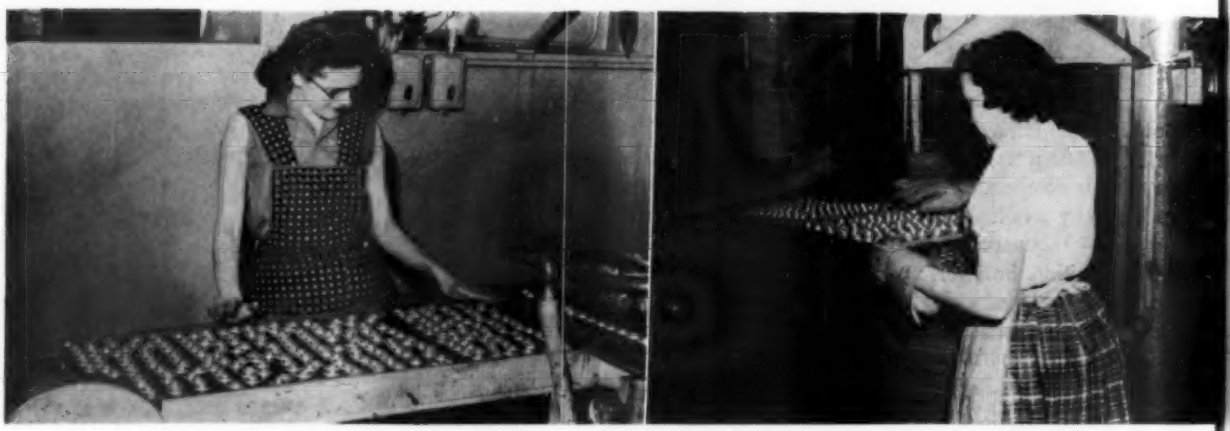
The acid is produced in nature by the fungus Gibberella, and is obtained experimentally by methods similar to those used in producing antibiotics. In Japan this particular fungus causes a serious rice disease

(Continued on Page 93)



Both African Violet (Pink Cloud) plants pictured at right were planted at the same time. The plant growth stimulator called 'Gibrel' was used on plant at left. The photo was taken 6 weeks after treatment. (Photo, Merck & Co.)

A young Connecticut firm makes its mark in the valve industry



Visual inspection of the rubberized gaskets is performed twice, with an additional spot-check on the production line. In the photo at left is shown the visual inspection just after the mounting cups have been gasketed by the automatic machine. At right, the cups are inspected again after emerging from the baking ovens, just before final packaging.

FLOWED GASKETS

THE Horatio Alger-type success story has become fairly commonplace in a field as young and as energetic as pressurized packaging, so that one particularly successful company's story often reads very much like that of the next. However, there is one lusty young Connecticut company that is making such a mark in its field that it is causing at least the aerosol valve industry to sit up and take a long second look.

This new factor in the valve industry is The Bristol Flowed Gasket Co., located in Southington, Conn. Since its founding less than two years ago it has outgrown its original plant, is currently expanding so fast that it is pushing out the wall of a second plant, and it will shortly move to a third and still larger installation.

The company's principal product for the aerosol field is the gasketed mounting cup that is an integral part of every aerosol valve. Bristol applies a flowed (liquid) synthetic rubber gasket to the underside lip of the mounting cup, a treatment that insures a pressure and gas-tight seal when the valve is crimped to the filled container. Though not visible to the consumer and possibly overlooked by people on the fringes of the industry, this treatment is essential for every valve mounting cup; since, were it not done, present valve crimping methods would probably be considerably complicated.

Organized in July, 1955 after several months of research and development, the company first began operation in a small 20 x 40 foot frame building in Bristol, Conn. Under the direction of Charles Rafferty, president, and Ray Lavendier, the two founders, it has quickly attained a leading position in the flowed gasket field. In its aerosol operation alone, a current annual production capacity of 150 million mounting cups has been reached.

With final assembly of a new production line, plus installation of the company's own cup manufacturing machinery—both scheduled for early this summer—production capacity will be doubled. Since it had been necessary to obtain the untreated cups from fabricators sometimes hundreds of miles away, production of cups under Bristol's own roof is expected to speed up delivery considerably to the firm's valve customers.

Another aerosol operation in which Bristol Flowed Gasket Co. is now engaged is the coating of the underside of the valve cup with an inert epoxy

resin, a treatment that prevents hydrolysis and other detrimental chemical reactions when the cup is to be used for a cola or a strong chemical detergent-type product. Although this coating has formerly been performed by the fabricator in most cases, it was discovered that excessive handling frequently caused abrasion of the coating so that its effect was largely dissipated. To cope with this problem, Bristol recently engineered and installed its own epoxy coating machinery — counting on its geographical position in the midst of a number of major valve manufacturers to push this particular type of valve cap into the forefront of the competitive picture.

Bristol's administrative "team," consists of (left to right), Jack Campbell, chief engineer; Charles Rafferty, president; and Ray Lavendier.

BRISTOL'S gasketing machinery, key to the whole operation, was specially designed from an original machine produced by Dewey & Almy, foremost supplier of gasketing compounds and machinery in the flowed gasket industry. Bristol's adaptation consists of automatic feed hoppers, belts, and a high-pressure "gun" that is specially timed to insert just the right amount of rubber fluid into the cup opening.

The machine, designed and perfected by Jack Campbell, the company's chief engineer and designer, operates at very high speed and with a high degree of precision. It is completely automatic and the gun device operates much like an aircraft machine gun, its muzzle opening at the precise moment the mounting cup is in position on the conveyor line.

It is to the efficiency of this machine, and to such safeguards as visual inspection both after the gasketing and after the baking in the oven, that the company lays the credit for much of its success. With the current expansion, more gasketing machines and another oven will be added, bringing productive capacity (on a two shift basis) to 300 million a year.

Both Charles Rafferty and Jack Campbell, two of the three men on Bristol's administrative team, were formerly associated with Dewey & Almy, now chief supplier to Bristol and other firms in the field. Mr. Rafferty, a graduate of Grinnell College and Harvard Graduate School of Business Administration, was associated with Dewey & Almy for three years, working in sales development, market research, and a number of related fields. Jack Campbell spent twelve years with D & A, mostly in engineering. He designed some of D & A's machinery, and had a hand in the installation of equipment for Bristol.

Ray Lavendier, the third member of the team, is a graduate of Clark University, Boston University Graduate School, and had most of his early experience in the banking field. He and Charles Rafferty, friends since boyhood, formed the company together in 1955.

EVEN in its first few months of operation, Bristol was able to claim a number of major aerosol valve manufacturers as customers; and with the improvement of machinery and techniques, can now boast of customers throughout the East. Mr. Rafferty explains the maturing of the company this way: "Our early difficulties were somewhat complicated because we lacked an 'old man' — someone of experience in the field on whom we could fall back for help on production problems and techniques. However, relying on our staff and coping with each problem as it came up, we were able to become experienced ourselves. Now, although our administrative group totals only 94 years in age among the three of us, we feel that our combined experience is beginning to pay off. This does not mean that we don't have any problems, but it does mean the lumps are becoming easier to take."

Though Bristol's principal production is aerosol mounting cups, the company manufactures a number of

(*Continued on Page* 89)

At left the gasketing machine is automatically depositing the treated mounting cups on trays. The trays then are carried on a long conveyor to the ovens (rear of photo, right), where the gaskets are hardened by baking.

When your customer sees—and smells—how quickly and effectively MEELIUM works, how *spring-fresh it makes the air*, it can mean more sales for you.

MEELIUM works effectively because it neutralizes and *destroys* both organic and inorganic odors completely—it doesn't merely cover them up. And it can do the job in an average-sized room in from 3 to 5 seconds—your customer will like this kind of economy, too.

MEELIUM in suggested concentrations is chemically stable, non-corrosive, and about equal in toxicity to pyrethrins. It is supplied to the aerosol industry as a 60% active deodorant.

MEELIUM is practically odorless. If a fragrance is desired we suggest a maximum of .1% of a suitable perfume.

WRITE TODAY FOR COMPLETE DETAILS ON ECONOMICAL MEELIUM FORMULATIONS AND CONTRACT PRICE SAVINGS.

TRY THESE PRENTOX PYRONYL AND PYRETHRUM PEST-TESTED PRODUCTS

Pyrethrum Extract #20 • Pyrethrum Extract #100 • Pyrethrum Extract 20% • Pyronyl #20 Pyronyl #100 • Universal Concentrate • Pyronyl #101 • 50-5 Oil and Emulsifiable Concentrate 40-5 Concentrate • 20-8 Concentrate • 66-6 Oil and Emulsifiable Concentrate • Pyronyl 75—The Oil-Free Concentrate • Roach Spray Concentrate • Pyrethrum Powder • Dust Concentrates

PRENTISS DRUG & CHEMICAL CO. INC. NEW YORK, N.Y.

PRENTISS DRUG & CHEMICAL CO., INC.

101 West 31st Street, New York 1, N. Y. • 9 South Clinton Street, Chicago 6, Illinois

DETROIT • SAN FRANCISCO • LOS ANGELES • TORONTO • MONTREAL

Lanolins for Aerosols — III

Croda—

"major world source"

THE company that lays claim to being "the major source of wool wax derivatives in the world" is Croda, Ltd., London, England. Through its subsidiary, Croda, Inc., New York, wool wax alcohols in a number of different grades are currently being marketed in bulk quantities to the American and overseas aerosol and cosmetic industries.

The parent company began to manufacture lanolin by refining wool grease, a by-product of the wool textile industry, back in 1925. A factory was established at Rawcliffe Bridge, Yorks, near Bradford, England, the world's major source of wool grease. In the early days of the company lanolin was easily its most important product, but eventually Croda added facilities for producing wool wax alcohols and other lanolin derivatives.

The term "lanolin" originates from the 1882 patent specification of Braun and Liebreich, two German inventors who were probably the first persons to have attempted the preparation of a pure neutral wool grease from the crude product. Since that time refined wool grease has now come to be known as adeps lanae, lanolin, wool fat, neutral wool grease, lanoline, etc., etc. Croda argues that, in view of the fact that it yields no glycerin on saponification, it is correctly termed "wool wax"; since higher aliphatic alcohols, sterols, and triterpene alcohols are the products of saponification apart from higher fatty acids.

It is to these alcohols, and more especially to cholesterol (so far as is presently known) that wool wax owes its special properties, and hence its versatility.

The use of wool wax (lanolin) in the cosmetic industry has come to be well known and well established —mainly because there doesn't seem to be any other commercially available wax to equal it, or any able to take its place chemically. It is used as the basis of many cosmetics that are emulsions of the oil-in-water type (including cold creams, certain cleansing creams, and nourishing creams). If the product does not form the base for such cosmetics, it is generally found in the formulation in the capacity of an emollient, softening agent, stabilizer, plasticizer, etc.

The three apparently "unbeatable" properties of lanolin are:

1. Non-rancidity.
2. Emolliency.
3. Water absorbency.

Woolwax Alcohols

The cosmetic chemist now has at his disposal a newer group of derived chemicals, namely, a group containing those very alcohols which form the basic components of wool wax—without the characteristic stickiness of lanolin. These wool wax alcohols are available commercially in the following forms:

1. The mixed wool wax alcohols ("Hartolan" and "Super Hartolan" containing about 28-30% cholesterol).
2. A cholesterol-rich fraction containing upwards of 70% cholesterol ("Kathro").
3. A cholesterol-rich fraction containing upwards of 50% cholesterol ("Dastar").
4. Blends (styled "absorption bases") of certain wool wax alcohol fractions and wool wax esters.
5. The alcohol-soluble fraction of mixed wool wax alcohols ("Lanethyl").
6. The mixed wool wax alcohols in water-soluble form ("Polychol").
7. Chemically-pure cholesterol.

The emulsifying properties of mixed wool wax alcohols make up their most important characteristic, and were largely responsible for their introduction into the British Pharmacopoeia. These alcohols have the ability to emulsify large quantities of water either in their original form, when plastic cream-colored preparations resembling hard plasticine, result, or blended down with hydrocarbons (including the liquid, soft, and hard paraffines, kerosene, white oils, and white spirit). Liquid fatty alcohols such as oleyl can also be used as diluents.

The applications, both present and potential, for wool wax alcohols in pressurized and non-pressurized cosmetic preparations are considerable.

(*Continued on Page* 89)

This article is the final in a series on lanolin and lanolin derivatives for use in cosmetic aerosols. Articles on other major producers and their particular products appeared in Aerosol Age for April and May.

RISDON
STAR
THE RISDON MANUFACTURING COMPANY
RISDON

AEROSOLS ...in Review

More on Propellant vs. Propellent

THE propellant-propellent spelling controversy continues to rage, with the "ANT" school gaining added backing in recent months. Jack Pickthall, chief chemist for Polak & Schwarz (England) Ltd., Enfield, Middlesex, England, writing in *American Perfumer and Aromatics* for March, goes to no less a mighty source than The Philological Society, foremost word authority in Great Britain.

In answer to a letter of inquiry from Mr. Pickthall (as quoted in *American Perfumer*), the secretary of the society wrote

"Speaking for myself, I should say that 'propellent' was the regularly derived form from the Latin participle 'propellent(em)', cf. ('astringent'). However, the fact that some words come through French with 'ant' (as in 'attendant') and that there has sometimes been refashioning after Latin, makes for uncertainty. We get such cases as 'pendant/dependent', sb. and adj., and 'dependant/dependent', sub., but 'dependent', adj.

"In spite of the fact that the *Oxford English Dictionary* gives under 'propellent a. and sb.' 'also erroneously -ant', it looks as if 'propellant' (sb) were established, or becoming established, in describing explosives, and I do not think anything would be gained by trying to insist on 'propellent' for this use."

Some three weeks later Mr. Pickthall received a "formal" decision from the council of the Philological Society, through its secretary:

"I have now been able to refer your question about the spelling of 'propellent/propellant' to my council. The council in fact confirms the opinion I expressed to you in my letter that the spelling 'propellant' must be considered to be established for the noun used in describing explosives."

Mr. Pickthall concludes, on the basis of this decision, that: It seems obvious that one must differentiate between the adjective as for instance 'the *propellent* action of a substance' and the substance in question, i.e., *the propellant*. Two words are obviously required and just as obviously the adjective is *propellent*. This leaves 'propellant' as the word to be used when speaking of the halogenated hydrocarbons used in aerosols."

Added to the "ANT" camp recently was Union Carbide & Carbon Corp., which announced construction of a plant for *propellant* production, *American Perfumer*, (on the basis of Mr. Pickthall's article), *Soap, Perfumery & Cosmetics*, an English publication, *Package Engineering*, Solvay Process Division of Allied Chemical & Dye Corp., and a number of other leading companies and publications.

In the words of Plato "Those having torches will pass them on to others!"

NEW interest in aerosols in Canada is evidenced by an article in *Canadian Packager* for April. Based on an interview with Grant L. Armstrong, supervisor of DuPont of Canada's "Freon" products laboratory, the article stresses the many existing and potential uses for pressurized packaging.

After a discussion of the general principles of aerosol operation, together with a summary of the advantages of the aerosol container over conventional packages, the article turns to the question of who is to do the packaging: "Since there are so many variables to be considered, and because expensive loading equipment is needed to turn out a finished areosol product, this type of packaging is done largely by specialists who have acquired the necessary technical knowledge. "Contract loaders' pressurized packaging."

Mr. Armstrong describes some of the research work carried on at his company's laboratory at Kingston, Ont. "The aerosol work at the lab falls into two main categories. First there is the confidential evaluation service for manufacturers who wish to know if the product they have submitted can be adapted to the spray package. This is not a just a matter of dumping in so much product and so much propellant. . . . The basic concentrate often has to be altered in some way in order to make it compatible with the propellant, as well as produce an end product which performs as much like the original as possible.

"In addition a suitable valve and container must be selected and the contents of the package must have no adverse effect upon either of these components nor upon anything with which it will come in contact during use. The propellants themselves are nonflammable, nonexplosive, nonirritating, relatively nontoxic, and essentially harmless to fabrics, furs, and finished fabrics.

"The second phase of aerosol work at the lab deals with the development there of entirely new aerosol products for general release to interested loaders and marketers. The latest to appear as a result of this type of research is an anti-tarnish spray for silverware which has just come on the Canadian market.

(*Turn to Page* 55)

Preferred for Foam Product Dispensing because of Functionally Superior,

Clayton
"NOZZLE DOWN"

dispensing valves and covers

Ever increasing and impressive...the nation-wide preference for "Nozzle Down" valves and covers for shaving creams, hand creams, shampoos, suntan creams, rug and upholstery cleaners . . . all foam dispensed products! Why this definite Clayton-trend? Because of these proven, outstanding Clayton features:—

ABSOLUTELY TROUBLE FREE! Proven simple non-clogging design.

GREATER PRODUCTION ADVANTAGES! Valves can be pressure filled. Reports from users indicate very highest production speeds.

ALL VALVES AVAILABLE WITH COATED MOUNTING CUPS! Colored-enamel exterior coatings . . . highest quality corrosion-resistant interior coatings.

COMPLETELY, SECURELY ASSEMBLED! Nothing to put together. Components can't come apart in shipment or use.

VARIOUS FLOW RATES!—to suit specific product requirements!

FIT ALL TYPES OF PRESSURE CONTAINERS with standard 1" diameter openings. Also available for 202 and 211 diameter pressure-type cylindrical containers of all sizes.

NO ACCIDENTAL DISCHARGES! Exclusive screw cover principle assures absolute safety. Valve is securely locked in non-dispensing position when covered.

TIME-TESTED AND PROVED ON HUNDREDS OF MILLIONS OF CONTAINERS!

These Clayton Products Give Your Package

MORE GLAMOUR...MORE SALES APPEAL!

Clayton's "Dress-Up"™

Plastic skirt simply and permanently snaps on to top of container.

Glama-Walls™ and Covers

The Glama-Wall snaps on permanently to standard production containers. User simply removes small, handsomely designed locking screw cap. Available in an unlimited variety of colors, shapes and sizes.

For details on more attractive, economical and efficient packaging for your foam product...write, phone or wire

Clayton
CORPORATION

Paper on Plastic-Coated Glass Aerosols Highlights SCC Meeting

THE Society of Cosmetic Chemists met at the Hotel Commodore in New York City, May 10th, to hear a full program of technical papers on cosmetic topics. The major paper on the program of interest to the aerosol industry was a talk by A. R. Marks of Wheaton Plastics Co., Mays Landing, N. J., entitled "Plastic Coated Push Button Containers."

"In certain quarters of the fragrance industry it is well considered that the aerosol will soon be the only recognized method of packaging colognes and perfumes," Mr. Marks declared. Merits of the aerosol method of packaging and dispensing include: no evaporation, no oxidation, no contamination and no degeneration of fragrance. Aerosol packaging of cosmetics, he noted, offers numerous real advantages, in addition to the obvious one of novelty. "There is a tremendous apparent increase in usable volume. In the case of foam products—like shampoos, although the volume apparently increases, the actual liquid content is quite small. The problems connected with excessive defatting of skin and hair are lessened considerably."

Discussing the safety factor in coated glass aerosols and the weight of the plastic jacket necessary to minimize hazard in use, Mr. Marks observed that this is a function of size and shape of container, mass of the liquefied propellant, potential expanded volume of the gas, headspace and total mass. Small cylindrical containers are of course more resistant to breakage than containers of more complicated shape and greater surface area. While an attempt is made to stay as close as possible to the size and shape of container desired by the customer, it is often necessary for the manufacturer to suggest modifications in design in the interest of safety in adapting a non-pressure designed bottle to a glass aerosol.

TURNING to drop testing of bottles, as a safety check, a subject which is currently receiving considerable attention following the publication of a contribution on the subject in the British trade press (See *Aerosol Age*, May 1957, pg. 34) by Jack Pickthall of Polak & Schwarz (England) Ltd. Mr. Marks stated that there are several factors which make drop testing of bottles subject to considerable variance in the evaluation of data. A primary factor is that breakage takes place so rapidly that even trained workers cannot observe the break without the aid of high-speed, stop-motion photography, which automatically produces a large measure of subjective conclusions.

Mr. Marks called for early adoption of an industry-approved method of evaluation, pointing out that, without such a method precise safety evaluation of glass aerosol packages will be practically an impossibility. He reported that such a method is under study by a committee of the Chemical Specialties Manufacturers Association, under the chairmanship of Dr. Joseph Lann of Du Pont's "Freon" Products Division. Nine laboratories are cooperating to determine reproducibility of results.

The proposed test uses a paper tent into which the bottles are dropped from varying heights onto a ¼-inch steel plate embedded in concrete. The mean height from which the bottle must be dropped to produce breakage and fragmentation is determined. Hazard is determined by perforations in the paper tent.

Assuming results of the cooperating laboratories to be sufficiently in agreement, tentative minimum standards will be proposed to the industry. This should give the aerosol packer and merchandiser a yardstick by which he can measure his product.

As to what maximum pressures may be safe in glass aerosols, the speaker suggested that no definite pressure can be fixed as a maximum safe limit, since safe pressure in a glass aerosol formulation depends upon a number of variables. The Wheaton Co. recommends that no package be formulated at a pressure over 24 pounds at 70°F. They caution, however, that observing this limit does not necessarily guarantee a safe package. "A 10 cc. pharmaceutical vial may be perfectly safe at over 24 pounds, whereas a 4 oz. hair spray container with a large proportion of propellant may not be safe at a pressure of 18 pounds.'

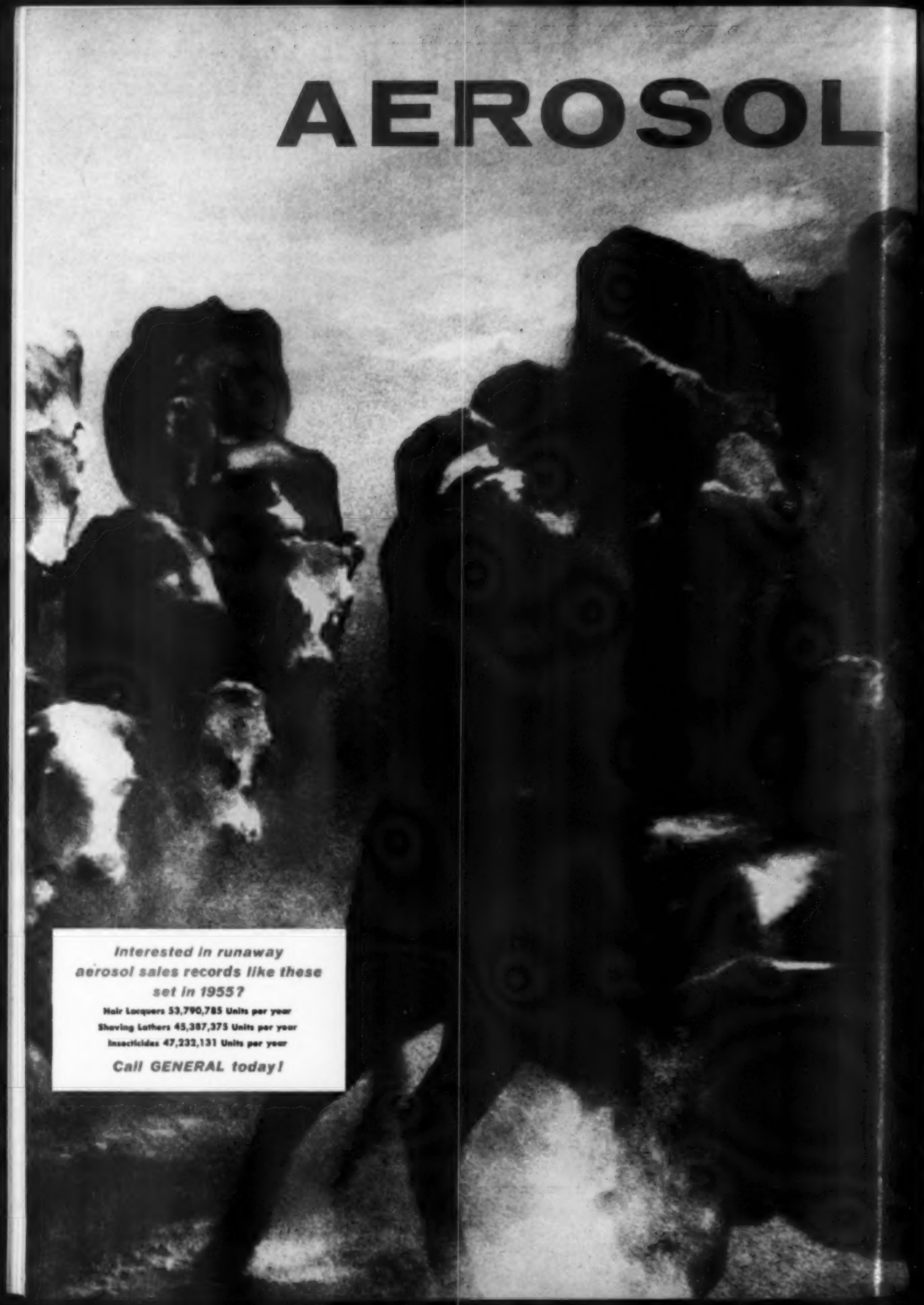
AN important consideration in determining how safe a package will be is the proportion of propellant to product. The bottle shape also enters the computation as a factor upon which the fragmentation pattern is based. The fragmentation pattern determines whether or not long, sliver-like particles may pierce the plastic jacket if the container breaks. The thickness of the plastic jacket is, of course, another important factor, since it provides resistance to tearing, abrasion, etc.

The large size containers, generally hair sprays, tend to be formulated with a higher proportion of propellant than is present in colognes or perfumes, "for this reason pressures should be lowered, and the plastic jacket should be of sufficient thickness to ensure elongation without rupture."

"The venting of these heavy jackets is of primary importance. Experimentally it has been found that excessive venting causes rocketing effects. Insufficient venting, on the other hand, may result in rupture of the jacket and allow glass fragments to escape.

"We have experimented with many different venting systems and have found that large holes in the bottom of the container provide a positive

(*Continued on Page* 89)


AEROSOL
Interested in runaway
aerosol sales records like these
set in 1955?
Hair Lacquers 53,790,785 Units per year
Shaving Lathers 45,387,375 Units per year
Insecticides 47,232,131 Units per year
Call GENERAL today!

Aerosol Industry Launches Consumer Publicity

by Frederick G. Lodes
Lodes Aerosol Consultants, Inc.

THE Aerosol Division of the Chemical Specialties Manufacturers Association has officially launched its industry-wide program of consumer publicity and promotion for aerosol packaging. Backed financially by 53 member companies — including container, valve and propellant manufacturers; contract fillers and packers; and aerosol product marketers—the initial program will run one full year.

Subscribers to the program include: Aerocide Dispensers, Ltd., Aerosol Research Co., Aerosol Techniques, Inc., Airkem, Inc., Atlas Powder Co., American Can Co., G. Barr & Co., Bon Ami Company, Boyle-Midway, Inc., Clayton Corporation, Continental Can Co., Inc., Continental Filling Corp., Crown Can Division, Dodge & Olcott, Inc., Dow Chemical Co., P. R. Dreyer, Inc., Fairfield Chemical Division, Fuld Chemical Co., Fuld Bros., Inc., Fritzsche Brothers, Inc., Fuller Brush Co., General Aniline & Film Corp., General Chemical Division, Givaudan-Delawanna, Inc., B. F. Goodrich Chemical Co., Helene Curtis Industries, Inc., Krylon, Inc., Lodes Aerosol Consultants, Inc., McLaughlin Gormley-King Co., Maryland Glass Corp., Mojonnier Assoc., Inc., The Nestle-Le Mur Co., Oil Equipment Laboratories, Inc., Owens-Illinois, Par Industries, Inc., Pennsylvania Salt Manufacturing Co., Pesticide Sales Corp., Peterson Filling & Packaging Co., Precision Valve Corp., The Risdon Manufacturing Co., Seaquist Manufacturing Corp., The W. T. Rawleigh Co., Sprayon Products, Inc., John C. Stalfort & Sons, Inc., Stalfort of Penna., Inc., Tube Manifold Corp., Virginia Smelting Co., van Ameringen-Haebler, Inc., VCA Incorporated, Western Filling Corp. and Wheaton Plastics Co.

Success of the aerosol publicity program in its first year depends to great extent on the cooperation of *all* factors in the industry, and their support of the premise that "What helps the acceptance of aerosol-packaged products in general, helps the sale of my particular product." Growth and expansion of the program's scope will depend on future financial support of member companies not yet subscribing.

Selection of the public relations department of G. M. Basford Company to handle the aerosol publicity program was made after careful consideration of several agencies. Most important of the criteria upon which selection was based was a detailed, realistic and specific plan of activities that could be carried on within the limitations of the budget.

The work of the agency's publicity team will be guided by the Aerosol Steering Committee, selected by the CSMA Aerosol Division Administrative Committee. With Frederick G. Lodes as chairman, the Steering Committee comprises: James W. Bampton, Krylon, Inc.; W. Earl Graham, Crown Cork & Seal Co.; A. R. Marks, Wheaton Plastics Co.; A. S. Pero, Fluid Chemical Co., Inc.; C. S. Stephens, American Can Co.; and J. J. Tomlinson, General Chemical Division, Allied Chemical & Dye Corp.

As it is important for all members of the aerosol industry to know exactly what the objectives, techniques, and expected results of the program are, here are the highlights.

Objectives

The basic long-range objective of the program is TO INCREASE THE SALE OF AEROSOL PRODUCTS. To accomplish this, publicity effort will be concentrated on these working objectives:

1. To educate consumers in the convenience, economy and safety of aerosols.
2. To give consumers the latest information on availability of various types of aerosols.
3. To encourage marketers of consumer products to investigate and convert to aerosol packaging.

(*Turn To Page* 90)

ONLY Continental GIVES YOU AN EXCLUSIVE LINE OF SIX DOME-TOPPED AEROSOLS

WITH SALES OF AEROSOLS expected to hit 600,000,000 by 1960 (about twice 1956 production), you can see the immediate expansion that lies ahead for every aerosol user. Of all suppliers, Continental is best equipped to meet your growing demands, for two reasons. First, Continental offers the most complete line of aerosol sizes. Second, Continental has greatly increased aerosol production facilities. We're ready to deliver all the aerosols you need, any size, any time, anywhere, from plants across the U.S.

Whatever your product—insecticide or shaving cream, air freshener or hair lacquer—Continental aerosols are tailor-made for you, lithographed with your design by Continental craftsmen. Engineering and research services are also available, as well as introductions to valve suppliers and commercial fillers. You can fill all your container needs *with one order* to save on shipping and handling costs.

QUALITY Continental SERVICE

CONTINENTAL CAN COMPANY

Eastern Division: 100 E. 42nd St., New York 17
Central Division: 135 So. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4

Cash in on the huge demand for AEROSOLS... call Continental TODAY!

Pressure Packaging Overseas

Dr. Tom C. Clark, of Druk-Pak, Ltd., European correspondent for Aerosol Age, reports on the 3rd Annual Congress of the German Society for Aerosol Research held Apr. 15-18 in Westphalia.

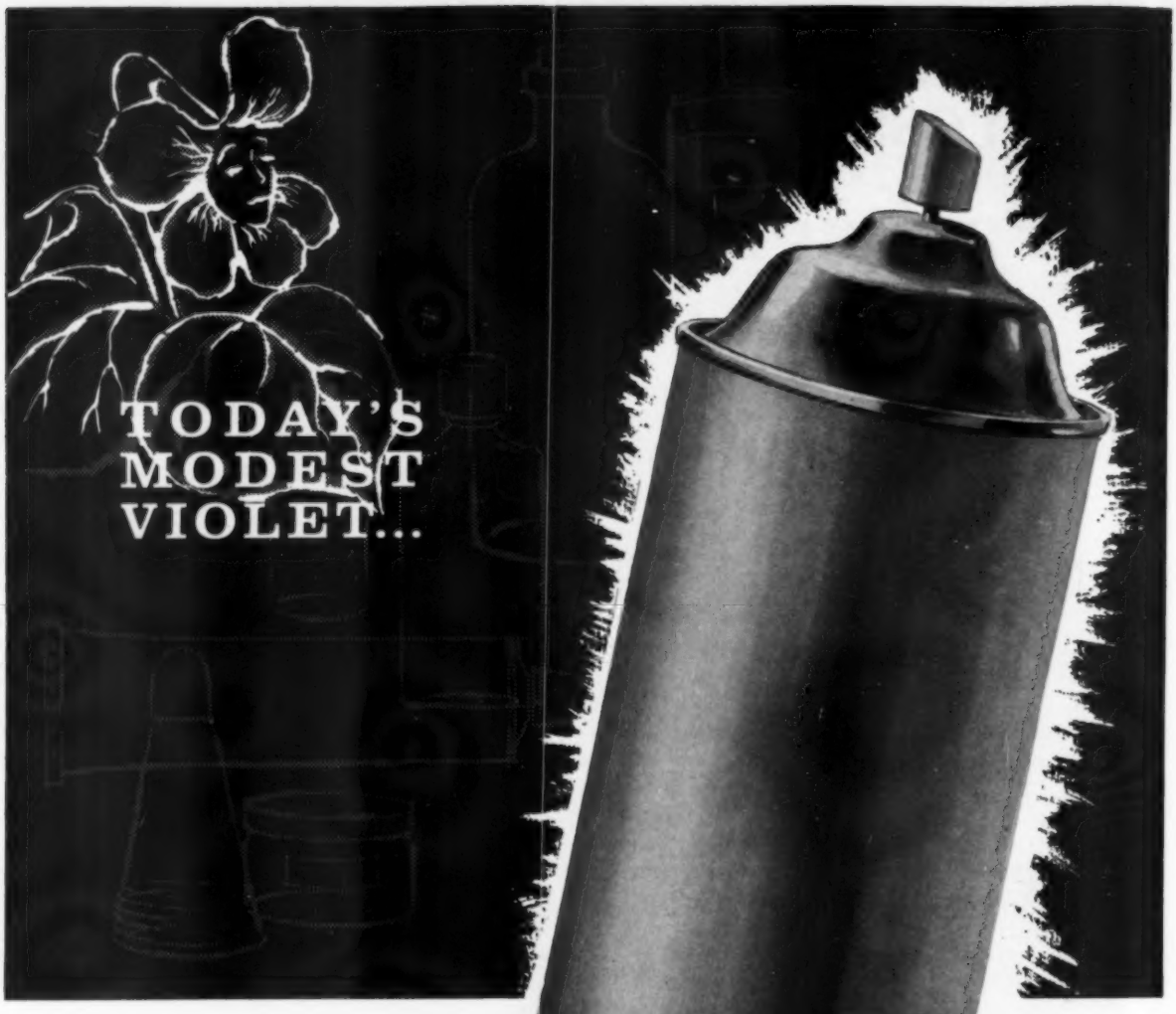
WITH over 400 doctors, scientists, physicists and technicians attending, the third annual Aerosol Congress of the German Society for Aerosol Research was held last month at Bad Lippspringe (Westphalia) near Paderborn. The participants came from practically every European country and from both sides of the Iron Curtain. In the three day meeting (April 15 to 18), every aerosol phase was covered in illustrated lectures followed by discussion and reports, with much new and interesting material in the broad aerosol field.

To these people, the term "aerosol" means any condition affecting the atmosphere — a wide field covering everything from weather, winds and rain, including radio-active fall-out on the one side, to its micron particle inhalation bodily effect, on the other. It is therefore understandable that the 40 principal lecturers were limited to 15-20 minutes each, with a somewhat longer discussion period following each talk.

The program of the first day was confined to aerosol therapy, the medical inhalant side. On the second day, the experts covered all atmospheric condition problems from smoke control to saturation boundaries for wind-borne radio-active dust particles. Towards the close of the session, developments in mechanical applicators, inhalation devices and aerosol apparatuses for improving, cleaning and disinfecting the atmosphere in closed areas, were covered. Here, our pressure packages got a play. Their pharmaceutical application is still practically unknown on the Continent, and their effect on closed room atmospheric conditions, because it has not as yet been studied independently by these independent scientists, is regarded with some skepticism. Impressive and interesting, however, were some practical demonstrations of the latest US aerosol therapy pharmaceuticals, with the latest types of applicators. Of particular interest was the report that US government and medical authorities have now approved, in connection with a metering valve, certain mixtures of the ordinary fluorinated hydrocarbons as the propellant for aerosol therapeutic inhalants.

Having seen something of the US interest in aerosol pharmaceuticals and the new pocket-sized applicators for ambulatory patients during our recent US visit, and having heard something of Continental clinical research in aerosol therapy, it occurred to us that a possible marriage of these developments might be explored by visiting this Congress. Or were we disappointed? The field is open. The US has the mechanical experience and the technical development. Their applicators are convenient, practical and handy for the ambulatory patient. Their metering valves are tested and reliable—(we understand too that a new European developed metering valve is shortly to appear)—and they have at least a short term experience, both market-wise and clinical, with the dosages and medicinal concentrations to be employed with certain propellant mixtures. So the mechanical side with a limited number of aerosol packaged pharmaceutical products is not only ready to go, but actually under way in the US with a certain amount of market experience.

On the Continental side, we can report an astounding, if not indeed staggering, research in aerosol therapy and the effects of an enormously wide variety and range of medicines on the bronchial and nasal passages as well as the deeper lung cavities, either in superficial or deep-breathing techniques. Specific results and reactions under ordinary and also unusual conditions have been tabulated, recorded and clinically verified. The research covers not only the effect of aerosol-administered remedies on these body air passages, but also the absorption rate and effect of the aerosol-administered remedy on the most important internal organs of the body, i.e. heart, kidneys, thyroid, pancreas, bladder, liver, stomach, blood, etc., All preliminary experiments are carried on with guinea-pigs, thousands of them, which, at various time intervals, are given



may be tomorrow's AEROSOL STAR!

It may be a cosmetic, pharmaceutical, chemical, food or specialty product. It may be a powder, liquid, or cream. It may be one of the regular products in your line. Perhaps it is an undeveloped formula or the mere "germ of an idea" in some person's mind. But the odds are that some product that is today unspectacular in its present package, may become one of tomorrow's fastest selling items when packaged as an *aerosol*.

Today in G. Barr & Company's laboratories, a continuing program of imaginative and persistent research is being carried on. All focused upon the development of new and better aerosol products and in further perfecting the Private Label aerosols we now manufacture.

We will be pleased to make available to you, the facilities and experience we have gained as America's leading Private Label Aerosol producers, to help you ascertain whether your idea, undeveloped formula or present product has an aerosol potential.

THREE
strategically located plants:
NEW YORK
CHICAGO
LOS ANGELES

G. BARR & COMPANY

3601 S. Racine Avenue • Chicago 9, Illinois

VCA AEROSOL VALVES ASSURE

Sales Attention!

• *Household Items* • *Hair Sprays* • *Deodorants*
• *Insecticides* • *Garden Sprays, etc.*

VCA QUALITY FEATURES:

• Positive quality control • Unlimited production facilities • Special spray guide button (positive direction of spray) • Restricted orifices for all types of formulations • Mechanical break-up button • For cold or pressure type filling • World-wide acceptance and distribution • Qualified supplier to major national companies (over 200,000,000 valves) • **ALWAYS DEPENDABLE... ALWAYS COMPETITIVE.**

Send specifications for sample and prices.

See us at the show

VCA INCORPORATED

1720 Fairfield Avenue, Bridgeport, Conn.

aerosol inhalant administrations of different remedies. Vital internal organs are later analyzed for effect and remedy absorption, retention or concentration. The tabulated results are striking to say the least. Aerosol-administered iodine, calcium, potassium, phosphorus, etc., have been traced through each of the important internal organs and their effects carefully noted for the different concentrations and different periods of inhalation. All of this careful research necessarily precedes any human administration.

In Europe, aerosol therapy has now advanced far beyond the area of bronchial applications such as asthmatic coughs and specific conditions of the nasal and other air passages. Certain remedies, on which the research is complete, are already being aerosol-administered, clinically, thus avoiding the stomach and alimentary canal with its secretion discharges and their effect on the diluted remedy as well as the objective organ or specific condition. By introducing their aerosol-administered undiluted remedies directly into the blood stream from the lungs and reaching the desired organ or area from its most normal and unobstructed source of correctional or nutritive materials, they are in process of achieving a revolution in therapeutic medicine. It may well be that in a short time, instead of a pill or awkward, sometimes unsterile or painful injection, the patient will simply put an applicator in his mouth, press it against a small metal or glass container, inhale deeply and receive, in an aerosol application, through a controlling meter valve, the equivalent of one pill or so many ccm of injected material. And this development may not be so far away or fanciful as it sounds, should the two sides of the Atlantic with their respective developments merge them along a common line. This merger is desirable if the development is to be accelerated.

European aerosol therapy research has been carried on principally in universities, laboratories and at a variety of clinics operated either in connection with the universities or the numerous baths or spas which dot the European scene. The universities are well known, but the contributions from the baths and spas are new and worthy of mention.

The famous German watering places are no longer fashionable resorts for the rich—indeed there are no longer any rich. They are now the workman's health institutions where, at the expense of his insurance company (the powerful unions have nothing to do with it) the worker goes for cure, rest or recuperation. Here, the best doctors treat him with all the latest medicines and equipment. In the clinics of these spas, well-trained doctors are now working out the techniques, dosages and concentrations for an aerosol therapeutical administration of remedies applicable not only to the bronchial but also other internal body areas.

The only draw-back is that all treatment must be clinically handled. The large machines and elaborate equipment—all expensive—required

VCA AEROSOL VALVES FOR Cosmetics ASSURE SALES LEADERSHIP

VCA design flexibility and unique application operation, means sure-fire customer acceptance for your package. Do it inexpensively, easily, smartly. VCA has a valve for your need. Inquire now!

A few examples:

A NEW! Simply press the cap down for spray. It's metered! No caps to lose. Glass or metal. All colors, caps, styles.

B Mechanical break mist. Conventional valves. Design features unlimited.

C Standard button operation type. Selected caps in metal or plastic. All colors, styles. Over 750 sprays out of 2 oz. bottle. Economical.

D Colorful caps designed for your bottle. Metering the spray right from the cap makes this a perfect success. Private molds on request.

Send specifications for sample and prices.

VCA Incorporated 1720 Fairfield Avenue, Bridgeport, Conn.

See us at the show

for aerosol nebulization and administration of the medicinal remedies bind the patient to a place. For further treatment after discharge he must seek out a doctor who has the necessary equipment in his office, or journey again to a spa or clinic. There is nothing for the ambulatory patient, who has his work and family corps to care for, except the questionable and sometimes unsterile pocket nebulizer with its rubber bulb for hand pumping. It is at this point, we believe, that our pressure packaged pharmaceutical aerosols can play an important role. They may be able to free the patient from constant office or clinic attendance. With a pocket applicator, under a physician's guidance, he may secure temporary relief, if not complete cure.

We wish to emphasize that the goals mentioned are not now existent and will need some time in research and experiment before they can be approached. But we do believe the elements are present. They need only to be welded. On the one side are all necessary technical devices and applicators as well as the freedom, with official sanctions, to employ the necessary propellant components. On the other side are the advanced research and tested remedies waiting for the technical developments to free the ambulatory patient from clinical confinement. We hope the two can get together, and for this humanitarian cause are prepared to lend our every assistance on a "thank you" basis. In closing, we can only express our hope that within the near and foreseeable future all allopathic pills, if they are indeed still necessary, may be administered with a pocket aerosol therapy applicator and not taken down the alimentary canal with their consequent upsetting reactions.★

Canco Sales Conference

AMERICAN Can Co., New York, held a national sales conference in April which was attended by all of the company's U. S. and Canadian sales representatives, as well as those of Sun Tube, Bradley Container and and Pittsburgh, Canco subsidiaries. The session, held at the Greenbrier, White Sulphur Springs, W. Va., was attended by over 250 Canco representatives.

E. K. Walsh, general sales manager, was in charge of planning and conducting the program, in the course of which representatives were brought up to the minute on current trends in the container field and American Can's plans for expanding sales in 1957.

Among the speakers was C. S. Stephens, assistant general manager of the company's Non-Food Container Division, who touched on American Can Company's growing role in the aerosol container field. The group also saw a preview of Canco's big TV presentation on pressure packaging which received its premiere April 8.

Mr. Stephens declared that a new era in the pressure packing of food and drug products is about to provide American consumers with pressure-packed items undreamed of just a few years ago. He said that he bases his statement both on Canco's latest reports of soaring pressure-can

VCA AEROSOL VALVES FOR *Pharmaceuticals*

ASSURE SALES APPEAL!

• *Oral* • *Nasal* • *Dental* • *Throat Sprays, etc.*

Pharmaceuticals for internal consumption, with standard inert propellents, because of VCA's controlled metered valves, which measure accurately to within plus or minus 10% of guaranteed dosage, are now possible.

A few examples:

A The button applicator takes a new look. Spray guide makes this aerosol most effective.

B This is the famous RIKER MEDIHALER for asthma relief, featuring the VCA metered valve that delivers the correct dosage.

C Finger tip control operates the molded plastic tube for a metered spray. When not in use, cap and tube become one, for positive closure.

D Here's one for the nasal. Clever cap arrangement has multiple advantages for a variety of uses.

E Here, too, plastic is a means-to-an-end, when coupled with a VCA metered valve. Simple operation.

VCA HAS A VALVE FOR YOUR NEED

CSMA

See us at the show

VCA INCORPORATED

Send specifications for sample and prices.

1720 Fairfield Avenue, Bridgeport, Conn.

production for food and non-food products—and on what he reports as a growing interest among leading consumer-product packers in the new market and profit potentials of pressure-packed foods.

Breaking the news of record-breaking pressure can production in 1956, Mr. Stephens declared that continuous developments throughout the industry make it almost impossible to pinpoint 1957 demand and production of pressure cans for food products. "However, it is safe to expect that this year the industry will turn out well over 400 million pressure cans for all products."

Total aerosol container production in 1955, he said, was about 300 million; it advanced to 350 million in 1956.

"Extensive work is now being carried on in research laboratories throughout the industry to provide the container-propellant combinations that packers will need as they move to broaden their product horizons and markets."

Aerosols' Activity on Rise in Northern California

CONSIDERABLY stepped-up activity in the pressurized packaging field in the Northern California area was noted last month by Ruth Teiser, AEROSOL AGE correspondent for the San Francisco area. Her report follows:

Robert J. Kerr Chemicals, Inc. has established a filling plant at Redwood City, about 25 miles south of San Francisco. Kerr purchased the pressure packing equipment that McGuire & Co. of Oakland had in operation up to about a year ago. H. C. Erpenbeck, Kerr's western division manager, told me they will start filling operations in a few weeks, and will pack their own products for Western distribution and also do some custom packing.

American Can Co. here inform us that plans have now been completed to manufacture several sizes of aerosol cans at the Oakland plant, (possibly in response to the Kerr development).

Colgate-Palmolive Co. in Berkeley reports that it is now having some custom packing done in Southern California. It wasn't having any done on the West Coast when we talked to the company last June.

California Spray Chemical Corp., Richmond, reports that it is currently having four items pressure packed, using Baltimore and Los Angeles custom packers. It may use Kerr's facilities, or it may establish a pressure packing line of its own.

Cutter Laboratories in Berkeley, which last June reported no interest in pressure packaging, now states that research is being done on the possibilities of adapting some of its products to the aerosol technique.

All this is in some contrast to our findings of June, 1956, when there was no activity except at Gustine (Avoset and Borden were and still are packing whipped cream there, using cans made by Continental) and very little interest.

NEWS of Pressure Packaging

Ungerer Appoints Murdock

Frank A. Murdock has been appointed office manager and district sales manager in Los Angeles for Ungerer & Co., New York, according to an announcement by Roy Hagelin, sales manager. Mr. Murdock has had 15 years experience in essential oils and aromatic chemicals and will cover the West Coast for Ungerer.

According to Mr. Hagelin, the Los Angeles office will be relocated and enlarged in the near future and will carry stock to provide better local service for West Coast customers.

•

Reed Research Names Chemist

Lazlo Haverland has been appointed as a chemist by Reed Research Corp., Shelton, Conn. Mr. Haverland has had six years experience in chemistry and has specialized in color photography.

•

New Johnson Repellent

"Off," a pressurized product based on diethyl-toluamide, the new insect repellent developed by the U. S. Dept. of Agriculture, has been announced by the S. C. Johnson Co., Racine, Wisconsin. The product will be marketed in a liquid and as an aerosol.

•

"Spraze" to West Coast

Nestle "Spraze", reportedly the largest selling hair spray in the low price field, recently began arriving in Oakland, Calif. in car load lots for distribution by the Rawson Drug Co. Don H. Grote, sales manager for Rawson, and Don H. Allen, Rawson buyer, are welcoming the first shipment with Steven Pierce, Nestle-Le Mur sales representative.

Lenk Companies to Consolidate and Expand

The Lenk Manufacturing Co. of Boston, Mass. and The Lenk Co. of Franklin, Ky., will be consolidated under one roof by early June, according to a recent announcement by Col. Allen D. Lenk, chairman of the board of directors. The present Lenk Co. facilities at Franklin, Kentucky, located on ten acres, are being expanded to accommodate all facilities of The Lenk Manufacturing Co. When relocation is completed, the announcement said, each company will occupy approximately 25% more space than at present. "Advantages to be gained by our customers in the trade, the consumer, and our suppliers, are the reasons behind this move," stated the Lenk board chairman.

For The Lenk Co., pioneers in aerosol packaging using paraffin hydrocarbon propellants, he reported that this expansion will make possible increased production necessary to meet expanding demand. Existing facilities at Franklin, Kentucky have been in operation for three and one half years. Additional acreage has just been purchased for further expansion in late 1957.

Factor Names Overseas Aide

Max Factor & Co., Hollywood, Calif. last month announced the election of Menache Politi, Sidney Factor, and Alfred Firestein as vice-presidents. Mr. Politi is an assistant manager of the export division and has been director of operations for Europe and the Near East since 1948.

Mr. Factor, son of the founder of the company, is an administrative and sales area supervisor for the Latin American and Canadian markets and Mr. Firestein heads the firm's pharmaceutical and specialties division.

•

CSMA Group Requests Data

All member companies furnishing containers, valves, propellants, or ingredients for pressurized packages, as well as fillers and vendors, were requested last month to send copies of their advertising, photographs, of products, catalogues, and other pertinent literature to the Chemical Specialties Manufacturers Association, Inc., 50 E. 41st Street, New York 17. The data will be used by the Aerosol Publicity Committee to complement the regular clipping service and to build up a library for aerosol promotion.

Frederick G. Lodes, committee chairman, who made the announcement, said that the material will be assembled and administered by the G. M. Basford Co., New York, in charge of the aerosol publicity campaign.

•

New Van Ameringen Plant

Van Ameringen-Haebler, Inc., New York, perfuming compounds manufacturer, has awarded a contract for construction of a new administrative building at the company's Union Beach, N. J. plant. Ground has been broken and the facilities are expected to be completed by August 1.

Automatic Production Line for Seamless Aluminum Cans

ALUMINIUM, LTD., Montreal, recently announced a new and completely automatic production line for manufacturing decorated aluminum cans. The development, the company says, will make possible "seamless, rigid aluminum cans in production quantities—long a goal of container manufacturers."

A pilot production line has been installed at a plant of the company's German subsidiary, Aluminiumwerke Goettingen. This unit turns out cans from small aluminum disks, which are fed into a press and then punched out by an extrusion process. The company points out that no soldering is necessary and there are no bottom or side seams, making the containers leak and rust-proof.

"The process will be offered freely to any concern, since the company does not plan to venture into can making," declared E. G. MacDowell, Aluminium's vice-president in charge of sales. He said the company developed the unit as part of a research program aimed at opening up new markets for aluminum. He said the process would be "of great significance to the U. S. and foreign packaging industries," particularly in view of a probable reduction in costs for aluminum containers. "We are on the threshold of the aluminum era in canning," he declared.

Cans being produced at Goettingen are already finding wide use in the German aeosol industry, it was pointed out. Gordon Black, Aluminium's director of sales development, pointed out that it will be possible, in an installation like that at Goettingen, to feed aluminum ingots into one end of a relatively simple and completely automatic series of machines, and from the other end receive finished, decorated cans ready for packaging and shipping."

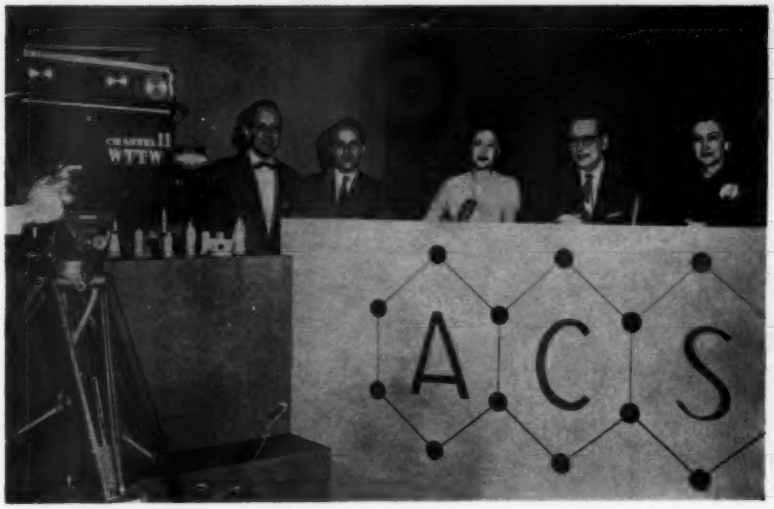
•

Aerosol Unit a Success

Mojonnier Associates, Inc., Franklin Park, Ill., reported that $35,590 worth of merchandise was aerosol packed in 30 hours in only 600 square feet of floor space at the company's booth at the April Packaging Exposition in Chicago. According to the company, more than $100,000 worth of merchandise could have been finished, had the line been running at full normal capacity.

The 14,236 bottles of aerosol cologne filled during the 30 hours of the show would have a retail value of $2.50 each, it was stated. The figures were quoted to dispel doubt in the mind of anyone thinking of entering the aerosol field.

The cold fill aerosol line included every component needed for normal commercial operation, and was completely installed in two days. Among the new items introduced by the company was a package refrigeration system and a valve crimper for bottles designed to operate at speeds up to 60 per minute.



Aerosols Demonstrated on A.C.S. TV Program

"Aerosols in the Push Button Age" was the subject of a demonstration and panel discussion on the American Chemical Society's (Chicago Section) weekly television program on Chicago's educational TV station, Channel 11 — WTTW, on April 12.

Morris J. Root (second from left), technical director of G. Barr and Co., aerosol custom filler, demonstrated the workings of pressure-packaging. Ralph E. Kaye (far left), district manager of Geigy Industrial Chemicals, was host to a panel discussing the importance of aerosols to the consumer, the career chemist, and the chemical industry. Panel members were Laura Weil (center), Chicago Hyde Park High School senior; Wallace J. Quick (second from right), Chicago manager of Distillation Products Industries Division of Eastman Kodak (and member of ACS television committee); and Mrs. Edward Olson (far right) of Highland Park, Ill., representing the housewife's viewpoint.

The purpose of the American Chemical Society's TV series, called "Adventures in Chemistry and Science," is to familiarize the public with a different area of science in each of its weekly programs.

•

Oven Cleaners Criticized

Pressurized oven cleaners are inferior to solvent type cleaners in paste form, according to the March issue of *Consumer's Research Bulletin*, published in Washington, N. J. The findings were made on the basis of the testing of nine pastes and four aerosol sprays. Products were judged on the standards of cost, whether metallic sponges and other abrasives might be required, and on general effectiveness.

It was admitted that aerosol products are easier to apply than the

That's she blows...
a whale of a fine aerosol spray
PFW creates aerosol fragrances that fit your products so well, you'll think nature had put them together, herself.
PFW
for odor and taste
POLAK'S FRUTAL WORKS INC., MIDDLETOWN, N.
AMERSFOORT, HOLLAND • PARIS, FRANCE • BREMEN, GERMANY • BRUSSELS, BELGIUM • SOFLOR LTD. PERIVALE, ENGLA

pastes, but the publication found them to be more expensive and somewhat inferior as grease removers. It was also asserted that metallic sponges are needed as an adjunct to pressurized oven sprays.

•

New Bridgeport Filler

Katona Chemical, Inc., a new aerosol filling firm, has been formed in Bridgeport, Conn. The company is headed by Rudolph Beers, Jr. and will specialize in small run aerosol filling and research.

Mr. Beers was a production supervisor for Bridgeport Brass Co. during that company's early work on aerosols, and later became plant manager for Connecticut Chemical Research Corp. His position before founding Katona Chemical was that of purchasing agent for Powr-Pak, Inc.

At present the company has in operation one filling line, that can be used for both cold and pressure filling. All equipment was especially engineered and built by Mr. Beers. The company is currently filling insecticides, fire extinguishers, room deodorants, and shave creams.

•

FTC Defines Ad Limits

P. B. Morehouse, assistant general counsel for compliance of the Federal Trade Commission, recently told the third annual men's day luncheon of the Cosmetic Career Women, in New York, that the FTC staff are "enjoying" TV cosmetic advertising both during and after hours.

"Cosmetic advertising questions generally arise in the Federal Trade Commission from one or more of three sources: competitors, consumers and direct observations by the Commission's staff. There are but few squawks from competitors, and those usually from one who is being corrected, and who then thinks of his friends and leaves us similar advertising to examine. Neither have we had any great number of complaints from consumers. Most grow out of the observations of our staff, from periodicals, radio, and TV."

Mr. Morehouse described how the FTC works closely with the Federal Communications Commission and the Food and Drug Administration, one from the standpoint of false advertising and the other from the standpoint of false labeling and claims.

"The publication of testimonials makes the contents of the testimonial the direct representation of the sponsor," he warned. "I suggest more care in TV advertising in the use of white coats wherever such use can falsely imply endorsement by doctors or dentists." He also cautioned against misleading advertising or "double talk," which he declared "can be sheer economic waste, as well as dangerous in the light of increasing consumer intelligence and inquisitiveness."

Mina Named Technical Director of Lodes Firm

DR. FRANCIS A. MINA, formerly vice-president and general manager of the E. A. Bromund Co., a subsidiary of Chemway Corp., has been appointed technical director of Lodes Aerosol Consultants, Inc., New York, according to an announcement by Frederick G. Lodes, president. The announcement said that the appointment, effective May 1, is in line with the firm's expansion program to establish a well-rounded aerosol service organization.

Dr. Francis A. Mina

Dr. Mina received his B.S., M.S., and Ph.D. degrees from Fordham, where he majored in physiology. Prior to entering the business world, he was instructor in bacteriology and other biological sciences.

In the industrial field his experience has been extensive and varied. He has been in charge of bacteriological, and biological testing of various products; has directed research and development on new products (including pharmacological testing); and has supervised hospital clinical investigations on new drug products.

He joined Zonite Products Corp. in 1946 and served as chief chemist and later as technical director. In the latter capacity for the company, which later became Chemway Corp., he assumed responsibility for providing technical consultation with the departments of the organization and with foreign plants and manufacturing agents.

Dr. Mina has been associated with the aerosol field for the past eight years, and during that time carried out research leading to the development and marketing of one of the first glass aerosols. The initial phase of this research program resulted in the successful marketing of the first three-phase system, and subsequently the ultra-low pressure system for dispensing alcohol-based products was developed and successfully marketed.

Dr. Mina is active on a number of the CSMA's aerosol committees, and is a member of the American Pharmaceutical Association, Society of American Bacteriologists, New York Academy of Sciences, American Chemical Society, and a number of other technical societies. He holds several U.S. and foreign patents in the aerosol field, and has published a number of articles on aerosol cosmetics, antiseptics, and pharmaceuticals, covering formulations, filling methods, containers, etc.

According to Mr. Lodes, the addition of Dr. Mina to the staff of Lodes Aerosol Consultants will permit the firm to better accomplish its goals of furnishing 1) technical assistance on all phases of the industry, 2) consultation concerning foreign aerosol markets, and 3) surveys related to proposed business acquisitions.

AWARD WINNING aerosol package

Congratulations to Rexall Drug Co. Ltd., for a package well done — a fine product and a competitive package.

DO YOU WANT AN AEROSOL PRODUCT?

CONNECTICUT CHEMICAL manufactures aerosol products such as hair sprays, room deodorants, insecticides, shaving creams, colognes, and many other household and cosmetic items.

CONNECTICUT CHEMICALS OFFERS YOU

- on the spot compounding of concentrates for space sprays, residual sprays and foam products.
- refrigerative filling and pressure filling of either metal or glass containers.
- technical know-how and quality control laboratory facilities.

PLUS

complete development laboratories for adapting YOUR product to the modern aerosol dispensing method.

CONNECTICUT CHEMICALS (CANADA) LTD.

Curity Ave. & Hollinger Rd.
Toronto 16, Ontario

Connecticut Chemicals (Canada) Limited
Curity Ave. & Hollinger Rd., Toronto 16, Ont.
Gentlemen:
☐ Can ..... (my product) be packaged in an aerosol container?
☐ I am interested in adding aerosol products to my line.
Signed .....
Company .....
Address .....

Cosmetic Chemists Honor Two

The Society of Cosmetic Chemists, at a special meeting at New York's Hotel Commodore on May 10, presented its special award for outstanding literature to Nobel laureate A. J. P. Martin and co-author P. T. James for their work in gas-liquid chromatography. The award carries a cash prize of $1000.

According to the SCC Literature Review Committee, publications by the two English scientists represent an outstanding advance in basic knowledge. The citation read: "Gas-liquid partition chromatography opens the way to basic information concerning the composition of natural products and processes . . . Gas-liquid chromatography shows great promise as a tool in cosmetic research and has already contributed to advances in aerosol and perfume technology."

Dr. Martin and his co-author, Dr. Richard L. M. Synge, were awarded the Nobel Prize in chemistry for the development and application of partition chromatography. Dr. Martin, a Fellow of the Royal Society, is also the holder of the Berzelius Gold Medal of Sweden.

•

Men's Purchases On Rise

The man's role as a family purchaser is sometimes overlooked, points out a recent study conducted for *Look magazine*. The study, conducted for *Look* by Alfred Politz Research, Inc., showed that men make 62% of the purchases of shaving cream, 21% of the deodorant, and only 9% of the hair spray purchases. The nationwide study included 13 drug store products, and listed only shaving cream, deodorant, and hair spray among aerosol products. These survey categories also included non-pressurized products.

•

Arctander Joins Colgate

Steffen Arctander, formerly chief chemist and perfumer for Co-Ro Manufacturing Co., Copenhagen, has joined the Perfumery and Essential Oils Division of the Colgate-Palmolive Co., Jersey City, N. J.

Kolmar Puts In Filling Line

Kolmar of Canada, Ltd., Barrie, Ont., has organized a new division for aerosol pressure and cold filling. Though initially it will fill only for the cosmetic industry, the company announced that the new division will shortly set up an insecticide line in a different building to insure non-contamination of cosmetic assemblies.

•

Aerosols Win Two Awards

The recent packaging competition of the Packaging Association of Canada at Toronto saw two aerosol products win major awards. Winner in the category of chemical and allied products was "Green Cross Moth Proofer," a product of Sherwin-Williams Co., Montreal. The package was designed by N. Burgess, Hinde & Dauch Paper Co. of Canada, and packaged by that company.

Rexall Drug Co., Toronto, won the general household product award for its "Klenzo Spot Remover," which is packaged by Connecticut Chemicals of Canada, Toronto. The container design was by R. Banks, Rexall.

B-M Names Marketing Aide

Boyle-Midway, Inc., the household products division of American Home Products Corp., New York, recently announced the election of E. C. Harbur as vice-president in charge of marketing. He will be responsible for all sales and sales promotion activities of the company.

Mr. Harbur joined American Home Products in 1953 as assistant to the president, having previously been with Liggett & Myers Tobacco Co.

•

Announce New Product Line

The newly reorganized Toiletries Division of the Park & Tilford Distilling Corp., New York, recently announced that it will introduce a medium-priced product line to be known as "Lady Tilford" toiletries. The new line will include aerosol toilet waters and several aerosol hair products, as well as a line of conventionally packaged products.

According to Jack Mohr, head of the division, with the launching of this new product line, Park & Tilford will move from a non-advertised to a highly advertised, pre-sold position. The new line will be "heavily advertised across the board," he declared.

•

Charles M. Hesson Dies

Charles M. Hesson, chief engineer of the Chisholm Ryder Co. of Pennsylvania, Hanover, Pa., died recently. He had been associated with the packaging and canning industry for 40 years, and was the holder of numerous patents on labeling, can casing, and various container handling machinery.

Mr. Hesson was one of the original organizers of the New Way Canning Machines Co.

•

Colgate Appoints Grace

Carl G. Grace, who had been president of the company's Canadian subsidiary since Jan. 1, 1955, has been elected vice-president in charge of the toilet articles division of Colgate-Palmolive Co., Jersey City, N. J. He joined the company in 1929.

Bon Ami in Australia

Niels Chew, of A. E. Chew & Co., export managers for The Bon Ami Co., New York, left last month for Australia to make a study of the market there for the new "Jet-Spray Bon Ami." The Bon Ami factory in Australia, in operation since 1931, also services New Zealand and South Africa.

•

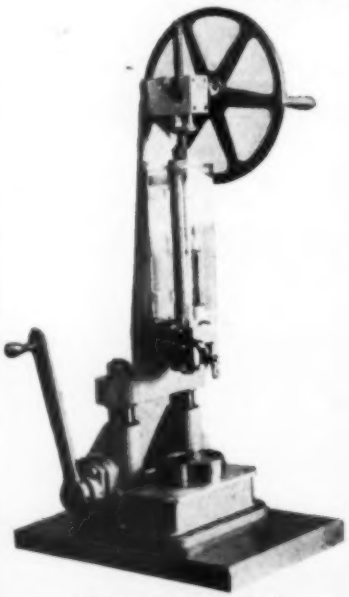
Kerr Announces Expansion

Kerr Chemicals, Inc., Park Ridge, Ill., recently announced the expansion of its aerosol packaging facilities to include a new 10,000 square foot plant in the San Francisco, California area. The plant, which is equipped to handle all types of contract filling, is located at 532 Howland Street, Redwood City, Calif.

At the same time the company announced the appointment of Herman C. Erpenbeck as Western Division manager (with headquarters at Redwood City) and of Laurence B. Noonan as national sales manager for all aerosol products.

DEVELOPED FOR THE CONSULTING LABORATORY, THIS APPARATUS IS THE ULTIMATE IN FUNCTIONAL DESIGN AND PERFORMANCE

Our apparatus division has been set up to make all items available to the industry. Prices and descriptive literature on request.

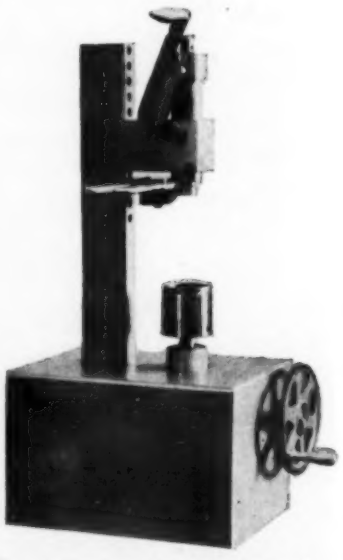


Foresman Liquefied Gas Manipulator

APPARATUS AVAILABLE

Liquefied Gas Manipulator w/Universal Head
Propellant Manifold for Manipulator
Hand Operated Vial Capper
Change Parts for Vial Capper
One inch opening Can Closing Press
Hydrostatic Test Units
Karl Fischer Pressure Titration Cells
Dead Stop Indicator for Karl Fischer Titrameter
Density Units
High Pressure Test Bombs
Can Sampling Units — Piercing or Valve Actuating
Pressure Gauging Unit — Pressure Balance or Water Filled
Flammability Set
Test Ovens — Standard or Custom Built
Instantaneous Chiller Units — Mechanically Refrigerated
Electric Hot Water Test Bath Standard or Custom Built
Hot Water Bath Transfer Baskets Safety Top
Tank Racks
Table Tank Rack Combinations
Safety Screen Tubes for Glass Pressure Tubes
Plastic Protective Screens
Gloves
Masks

Apparatus Division
ROBERT A. FORESMAN, JR.
1690 Margaret Street
Philadelphia 24, Pa.



Foresman Hand Operated Vial Capper

Struthers

Gardner

Struthers Names Two

John Struthers and Co., Ltd., Montreal, recently announced the appointment of W. F. Struthers as treasurer and J. E. Gardner as manager of the company. Mr. Struthers was for many years general manager for Canada of the Gourock Ropework Export Co. Ltd., and during the war he managed the Montreal office of the Financial Advisor (Dept. of Munitions and Supply) for the renegotiation of war contracts.

Mr. Gardner was formerly associated with Johnson & Johnson, Ltd., in a sales executive capacity. According to John Struthers, company president, the appointments, coupled with the firm's recent move to larger quarters on Pare Street in Mount Royal, are part of a major expansion program.

•

Bon Ami Sales Up 92%

The Bon Ami Co., New York, had one of the highest dollar volumes in sales in its history, according to the company's annual report for 1956. Total net sales for 1956 were listed as $5.4 million, 92% higher than the 1955 total of $2.8 million. The report credited much of the increase to the successful introduction of the new "Jet-Spray Bon Ami," plus the creation of a new company marketing team.

•

English Visit VCA

F. P. Webster, and Major C. R. Dibben, both affiliated with Specialty Valves, Ltd., Wolverhampton, England, manufacturers of VCA patented valves for England and Europe, were recent visitors to the Valve Corp. of America at its Bridgeport plant.

•

Food Potential Seen High

Through use of a plastic bag to encase the propellant, or by using a propellant that does not contain fluorine, sales of new pressure-packaged foods should grow to rival the 75 million unit annual sale of pressurized whipped cream, declared the March Industrial Bulletin of Arthur D. Little, Inc., published in Cambridge, Mass. In a brief article entitled "Let Us Spray," the bulletin sees foods and pharmaceuticals as the two "obvious potential markets" for pressure packaging.

"About 40 pharmaceutical aerosols, such as anti-infectives and bandage, burn and inhalation sprays, have already appeared, but commercial realization of pressure-packaged foods may be more difficult."

•

Breck Marks Anniversary

John H. Breck, Inc., Springfield, Mass., recently marked the first anniversary of the introduction of its "Hair Set Mist" to the national markets, with the announcement that the aerosol product has become the number two item in the Breck line. According to the company, the year-old product is responsible for the second largest amount in sales dollars, of any company product, shampoos being first. The product reportedly ranks third nationally in total sales among all hair set products.

"Hair Set Mist" is presently available in three sizes—4½, 8, and 11-ounces. It has been advertised intensively in national consumer magazines and on network television programs.

•

USDA Approves Diazinon

Use of "Diazinon" for fly control in food processing plants has been accepted by the U.S. Dept. of Agriculture, according to a recent announcement by Geigy Agricultural Chemicals, Ardsley, N. Y., producer of the insecticide. According to the company, its "Diazinon 25W" provides "outstanding fly control under a variety of conditions, and its light color virtually eliminates the possibility of unsightly stains on walls and ceilings following application of residual sprays."

•

Revlon Reports Record Sales

Revlon, Inc., New York, reported the highest sales for a first quarter in the company's 25-year history. The $23.5 million in the initial quarter of 1957 constituted a 16.5% increase over the corresponding period last year.

AEROFLEX "P" DIP TUBES

EVERY SHIPMENT LABORATORY TESTED FOR CRACK RESISTANCE

- Ideal for aerosols, atomizers, squeeze bottles and lotion pumps
- Odorless and non-toxic
- Resistant to most filler and propellant chemicals
- Dependable service
- No annealing necessary
- Also nylon Dip Tubes for special applications

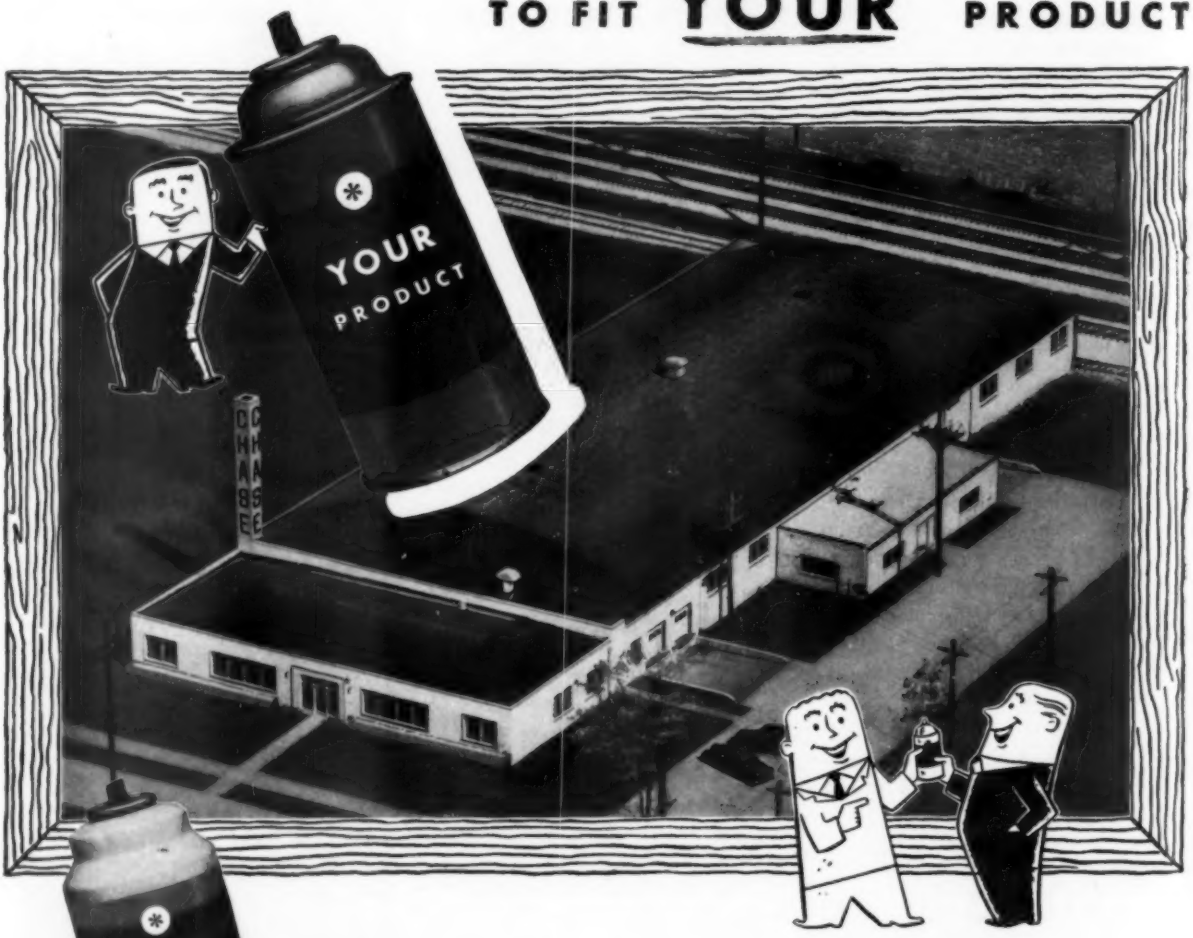
Write TODAY for new, illustrated brochure "Extruded Plastics" on company letterhead.

ANCHOR

PLASTICS CO., INC.
36-36 36th Street
Long Island City 6, N. Y.

AEROSOL *Packaging...*

TO FIT **YOUR*** PRODUCT



PRODUCTION VERSATILITY—Our facilities will handle oil and water base, liquid and foam products, of all types, *in small or large quantities.* No minimum run required and no maximum limit! *Rigid quality control* is maintained on all production regardless of the size of your run. All types of cans and valves are available to you from stocks kept on hand. Complete laboratory service lending itself to *dependable production* is a must for your aerosol or pressurized product needs and is also part of our complete service rendered by personnel trained in aerosol research. For information, consultation, or estimates, write or phone one of the countries first aerosol fillers — CHASE PRODUCTS COMPANY •

INCREASED PLANT FACILITIES—Our new 30,000 sq. ft. plant is centrally located for ideal distribution, with both rail and truck facilities. We offer warehousing, drop shipping in bulk lots, direct pick up and routing by major national truck lines. Outer Belt Line rail service connecting every railroad in the Chicago area. All these make for faster, more efficient, more economical receiving, handling, and delivery of your merchandise.

CHASE PRODUCTS COMPANY · MAYWOOD, ILLINOIS

Reed Reserach Moves To Shelton, Conn.

A HISTORIC old factory in Shelton, Conn., that supplied military equipment for five American wars, has just become the new home of the Reed Research Corp., a leading aerosol consulting firm formerly located in Bridgeport. The company, which had been the Aerosol Process Co., purchased the Baldwin machine shop, located in an old mill in Huntington, operated for 100 years by Eli Nettleton Baldwin and his descendents.

The old mill supplied gun parts to the U. S. Army in the Mexican War, also turning out daguerreotype mats about the same time. During the Civil War caissons and ambulances were forged at the mill, and much of the same equipment was produced there for the Spanish-American War. More gun parts were manufactured during World War I, and in World War II the mill's activities were switched to production of component parts for the Army Signal Corps.

The original wooden mill was an addition to a farm owned by William Wakeley, and was sold to the first Mr. Baldwin in 1846. It burned down in 1865, and was replaced by the present stone mill.

Reed Research Corp. is currently in the process of moving equipment from its Bridgeport plant.

Pegasus Exec. Testifies on Foreign Aid

SMALL and medium sized American businesses can play a vital role in the U. S. Foreign Aid Program, the Senate Special Committee to Study the Foreign Aid Program was told at a public hearing in mid-April by an executive of a company in the aerosol field.

Paul N. Weil, president of Pegasus International Corp., New York firm of international business consultants, said in a prepared statement that foreign manufacturers all over the world are an eager market for American "know-how" and technical assistance. Even the smaller U. S. manufacturer can turn this demand into a profitable source of income, while helping the economy of the foreign nation, he declared.

The experiences of his own firm, Mr. Weil said, demonstrate the ready acceptance abroad of American products and processes for licensing agreements.

He cited the case of a company in Connecticut that had developed a valve for aerosol packaging. On their behalf, he said, his firm had been successful in licensing this valve for manufacture in six separate foreign countries. "Not only was this of financial benefit to the American manufacturer, but, at the same time, it helped the foreign economies by stimulating the establishment of a new packaging industry."

The Senate Special Committee to Study the Foreign Aid Program was set up to study possible modification of the Foreign Aid Program. It has as one of its objectives the evaluation of the "various kinds of foreign aid and alternatives thereto." The Chairman is Senator Theodore F. Green (Dem. R.I.).

Pegasus International Corp. is located at 1 East 53rd Street, New York, and has branch offices in Tokyo, London, Frankfurt, Paris, Copenhagen, and Melbourne. It was founded six years ago to assist American manufacturers in establishing overseas operations.

•

Turner Appointed by CanCo

Robert A. Turner, former sales representative for the American Can Co., New York, in Southern California, was recently named assistant to the West Coast manager of sales. In his new post he will serve in a supervisory capacity, assisting the West Coast sales organization in the administration of the company's customer relations program.

CrodaNews

FOR HAIR SPRAYS
LANETHYL Pure Fraction of Lanolin Alcohols

★ plasticizer and humidity control agent for PVP
★ complete solubility in 98-100% ethyl alcohol
★ non-oily and non-tacky film forming agent and hair conditioner (high cholesterol content)

FOR SHAVES
SUPER HARTOLAN — Mixed Lanolin Alcohols

★ superfatting agent for fine, persistent lather
excellent "wet" feel

FOR ANTI-PERSPIRANTS
SOLAN — Water-Soluble Lanolin
(ethylene-oxide derivative)

Investigate:
CRODACOL FATTY ALCOHOLS
CRODACOL 'O' Oleyl Alcohol
'CAT' Cetyl Alcohol
'S' Stearyl Alcohol

Croda
New York
London
Milan

CRODA, INC.
15 E. 26 St.
New York 10, N.Y.
MU 3-3090

Chlorothene does a double job in spot-remover formulations

. . . lowers costs in several aerosol formulations

Chlorothene® saves money twice when it's put to work as an ingredient in spot-remover formulations.

First, it cuts costs by replacing a more expensive type of depressant. Second, it also serves as the active ingredient! The powerful "built-in" solvent action of Chlorothene does a superior cleaning job, but has no adverse effects on any type fabric.

Many other money-saving formulations contain Chlorothene, including moth-proofing and water-proofing products and insecticides. In all these formulations, Chlorothene cuts costs as a pressure depressant. It often permits elimination or reduction in the use of solvents with objectionable odors. It's a more stable, safer solvent (low in toxicity) and it has application in many nonflammable formulations.

We'd like to send you some information about Chlorothene—uses, costs, properties and other interesting facts. Write us today. THE DOW CHEMICAL COMPANY, Midland, Michigan, Department SO1026M.

YOU CAN DEPEND ON DOW

A.P.A.L. Marketing Aerosol Pharmaceuticals

ALLIED PROFESSIONAL ASSOCIATES, Ltd., Buffalo, N. Y., reportedly the first aerosol firm in the country to market a pharmaceutical with a metered valve, recently introduced a new line of ethical pharmaceutical products in aerosol form. The new line is intended primarily for the dental profession, with specialized application for the physician.

Each of the three products is equipped with an "Accu-Spray" nozzle, which is a combination dust cap, actuator, and flexible nozzle enclosing a VCA or Risdon metered valve. The nozzle device, flexible and self-adjusting, reaches otherwise inaccessible areas of the mouth.

The products are (left to right, in photo) "Topocaine," "Prophast," and "Surfadyne." Topocaine is a topical anesthetic in which the formulation has been improved by APAL to permit more effective, deeper penetration. "Prophast," termed "the first new concept in oral prophylaxis in 50 years," is aimed at eliminating dappen dishes and other intermediate carriers. It is said to be considerably more efficient, faster and more economical than standard means of oral prophylaxis.

The third new product of APAL is "Surfadyne," an anodyne-emollient spray for cankers, denture soft spots, stematitis, gingivitis, pyorrhea, sluggish healing, etc. This spray helps destroy deeply bedded pathogenic organisms without "promiscuous use of antibiotics."

•

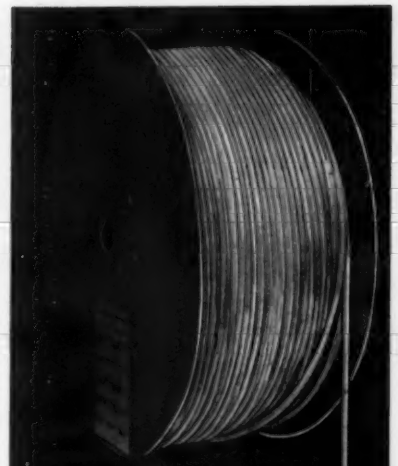
Book Review

A LIST OF PUBLICATIONS ON LIQUEFIED-GAS AEROSOLS 1933-1956, by R. A. Fulton, Entomology Research Division, Agricultural Research Service, United States Department of Agriculture. ARS-33-37.

Though essentially a reference listing rather than any type of literary volume this 48-page booklet will be of such value and interest to the aerosol industry that it well deserves the special mention of its own review. The author, himself well known in the industry, has compiled a complete listing of all articles on liquefied gas aerosols beginning back in 1933, and extending through the end of 1956.

This publication should be of considerable value not only in company libraries and research laboratories, but also in the libraries of associations, colleges, etc. Each pertinent article's title, its author, and when and in what publication it appeared, are listed.

Even a cursory examination of the listed titles, in any kind of chronological order, will reveal a capsule history of the progress of aerosol thinking in the U. S.



Highest Quality
POLYETHYLENE TUBING for AEROSOLS

. . . Now available in neatly traversed spools . . . no kinks no snarls!

Available on spools in lengths up to 3000 feet. Prevent costly delays—save time and money.

HYDRALENE NO. 35 polyethylene tubing will not split or crack even with tight friction fits.

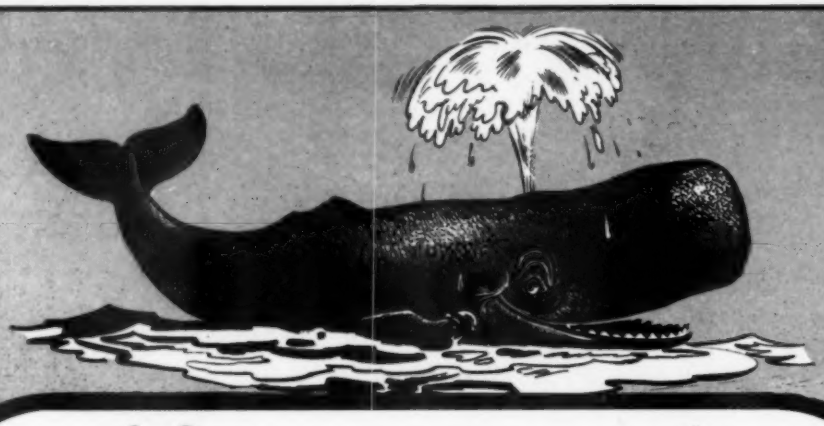
Features:

- Only finest quality virgin material.
- Close tolerances.
- Withstands severest tests for non-splitting or cracking.
- Also available in coils or cut pieces.

This tubing is the result of years of careful development work in the aerosol field.

Write today for free samples and Prices.

Hydrawlik
131 East First Ave.
Roselle, New Jersey
Phone CHestnut 5-0368



"let us spray"

Our massive friend pictured above, sprayed in a big way long before the birth of another giant, the modern aerosol industry.

American Cholesterol Products, Inc. is proud to have contributed to the whale of a growth of this colossus by developing unique and widely used non-irritating, hypo-allergenic lanolin derivatives, chemically designed for aerosols.

ACETULAN™ offers unlimited possibilities for new effects in aerosol formulations. It is a stable, 100% active, water-thin, liquid derivative of acetylated lanolin alcohols. Acetulan was literally made to order for aerosols. It has proven its value in actual practice in many types of aerosol products where it acts not only as a plasticizer and co-solvent for various components, but also as a penetrant, emollient, and protective agent for skin and hair. It is an excellent plasticizer for PVP and related compounds and is soluble in and acts as a solvent for most waxes, oils, propellants and alcohols. Valve clogging, solubilization difficulties and material incompatibilities are practically eliminated in the aerosol products formulated with Acetulan. Only ½% to 3% of Acetulan is sufficient to impart its desirable properties to skin and hair.

MODULAN® is the acetyl derivative of pure lanolin with superior solubility, emollient and super-fatting properties.* It is practically odorless and non-tacky, imparting soft waxy protective films to skin and hair. Small percentages of Modulan included in aerosol shave, shampoo, sunburn, and hand cream formulations, result in marked conditioning effects.

SOLULAN 98™ is a new, decidedly different polyoxyethylene derivative of lanolin. It is a 100% active, anhydrous, clear liquid product with complete solubility in water and alcohol in all percentages. The unique character of this lanolin derivative is obtained by balancing hydrophilic polyoxyethylene with hydrophobic acetyl groups. The result is persistent emollient films, and unusual solubilizing properties which lend themselves to the creation of entirely new effects in aerosol formulations. Try Solulan 98 for that difficult solubilization problem whether you wish to solubilize water or oil soluble materials. Its versatility, ease of incorporation and beneficial effects will surprise you.

AMERCHOLS® The Amerchols, particularly the low viscosity, liquid multi-sterol Amerchol L-101, are widely used in aerosols. These products, which represent lanolin cholesterols in their most active form, are excellent plasticizers for PVP films and have the multiple advantages of being unusual emollients, penetrants, and non-ionic, surface-active agents which are safe for the most delicate tissues. The Amerchols have been used for many years in all types of cosmetics and pharmaceuticals and are among the first lanolin derivatives to be used in modern aerosols. Many emulsion aerosol formulations contain Amerchols which impart to these products the same beneficial characteristics for which they are noted in non-propelled products.

RICILAN A™—Another exclusive development of American Cholesterol Products, Inc. Ricilan A is a viscous liquid wax synthesized from components of lanolin and castor oil. It is a stable, almost odorless, polymeric ester with properties which make it intriguing to the cosmetic and pharmaceutical chemist. Ricilan A is both alcohol and mineral oil soluble and imparts an emollient 'feel' to skin and hair which is unlike anything hitherto. It is a natural for aerosols.

Write to our research laboratories for literature, references, suggested formulas and samples.

*U. S. Patent No. 2,725,334

AMERICAN CHOLESTEROL PRODUCTS, INC. AMERCHOL

American Cholesterol Products

• INCORPORATED •

AMERCHOL PARK EDISON, NEW JERSEY

Products—
Processes—
Bulletins—

New Cylinder Introduced

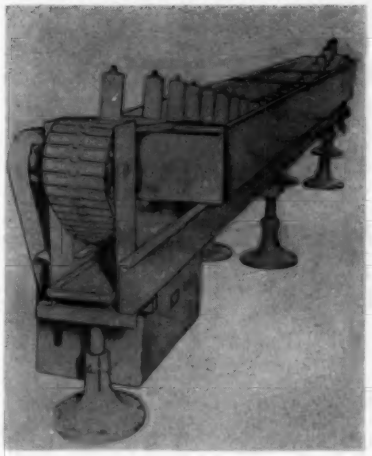
A new 132 cubic inch disposable cylinder for handling propellant and other aerosols and compressed gases has been added to the line of industrial sized disposable containers manufactured by the Tube Manifold Corp., North Tonawanda, N. Y. The company already has a line of 55 and 75 cubic inch containers.

The new cylinders measure four inches in diameter by 12 inches in length and have a five-pound capacity for the distribution of fluorinated hydrocarbon propellants. The company points out that stocking, delivery, and use in the field are simplified; and that distributors' refunds and return transportation costs are eliminated.

Bulletin DC-257, available by writing to the company, contains complete information on the new cylinder.

New Builders' Catalogue

Builders Sheet Metal Works, Inc., New York, last month issued a new equipment catalogue listing and describing the company's complete line of aerosol equipment. In addition to pressure tester, water baths, transfer apparatus, small pressure fillers, etc., the catalogue describes a complete laboratory setup for aerosol filling. The new 16-page catalogue illustrates and gives prices for each piece of equipment. Copies are available by writing to the company office, 108 Wooster Street, New York 12.



Island Aerosol Test Tank

Island Equipment Corp., Long Island City, N. Y., recently introduced its new "Styl-O-Matic" heat and leak test tank, which is specially designed for testing aerosols automatically. It consists of a tank and a movable chain belt that carries aerosols into the tank and up out of it. The chain is available in widths for single or double rows of aerosols, and the cans are prevented from floating or slipping down the incline by magnets attached to the chain track.

The tank itself may be constructed in hot dipped galvanized or stainless steel. Complete specifications and drawings, in a bulletin designated "AT-1", are available by writing to the company at 27-01 Bridge Plaza North, Long Island City.

•

New Aerosol Photometer

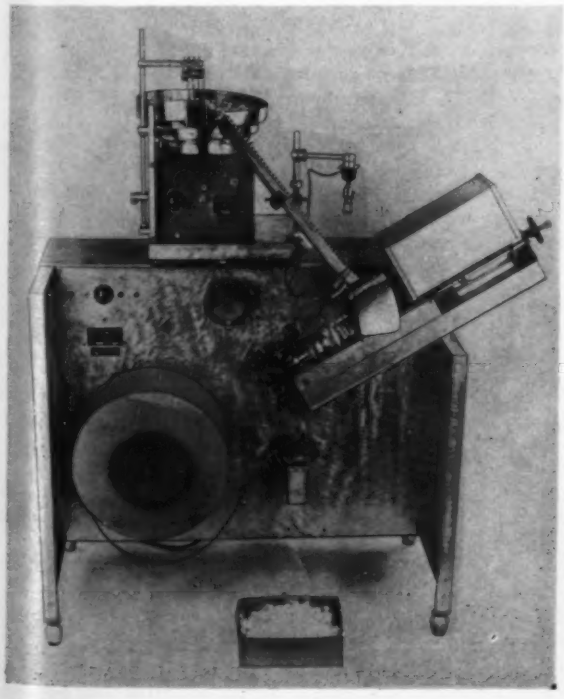
The Phoenix Precision Instrument Co., Philadelphia, has announced the Sinclair Phoenix forward scattering aerosol, dust, and smoke photometer. The device, mainly designed for measuring, recording and controlling dust and smoke concentrations, is described in Bulletin JM - 1000 - C, which can be obtained by writing the company at 3803 North Fifth Street, Philadelphia 40.

•

Hope Machine Catalogue

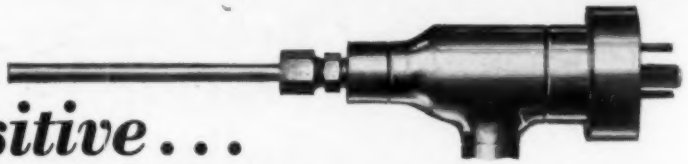
The Hope Machine Co., Philadelphia, recently issued a new catalogue illustrating and describing the company's complete line of filling machines. In addition to the usual description of performance, economy, etc., a complete specification chart is provided for each model. The fillers include those for everything from food to paint, and from cosmetics to pharmaceuticals.

Tube Inserting Machine Introduced by Chase

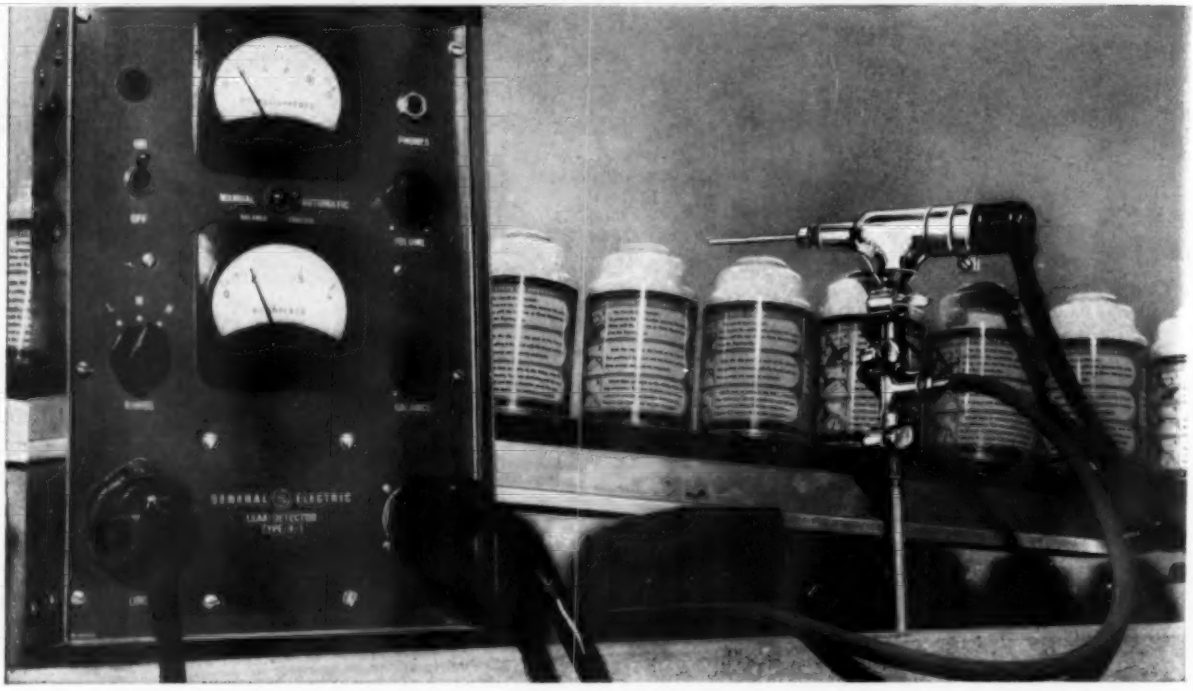


The Chase Equipment Corp., New York, last month introduced a new automatic tube inserting machine. The unit cuts off correct lengths of plastic tubing and inserts them firmly into aerosol valves and flat or nasal plugs at production line rates up to 140 per minute. Caps are fed to the tube insert station from a hopper, which is equipped to position for delivery, to reject defects, and to count.

NEW FROM GENERAL ELECTRIC RESEARCH



A nose so sensitive...



it sniffs defective aerosols

From General Electric research comes a new way to leak-test aerosols that provides improved quality control at low cost. Specifically designed for automatic, high-production leak testing, the new G-E leak detector checks each can quickly, automatically, and safely right on the production line.

HIGHLY SENSITIVE to any of the halogens commonly used as propellents in pressurized cans, the instrument will detect a gas concentration of only one part per million. Up to 60 cans per minute may be tested with one General Electric fixed-head leak detector ... multiple instruments may be used for 100% leak testing on faster moving production lines.

AUTOMATIC REJECTION OF FAULTY CANS can be initiated through use of an electronic relay which is available as an accessory with the instrument.

TOLERANCE LIMITS FOR QUALITY CONTROL can be set and maintained through use of G.E.'s new leak standard. This makes it possible to set the leak detector so that only gas concentrations in excess of predetermined limits will be detected.

LOW IN COST, the leak detector, with control unit and detector unit, sells for only $613.20 net.

ACCURATE LEAK DETECTION MEANS PROFITS

GENERAL ELECTRIC

FOR FURTHER INFORMATION, fill out and mail the coupon at right, or contact your nearest General Electric Apparatus Sales Office. We shall be glad to help in determining just how the leak detector can be applied to improve the quality control of your aerosol cans at low cost.

General Electric Company
Section A585-67
Schenectady 5, N. Y.

Please send me the following publications:

.....**GEC-1410**—Fixed-head Leak Detector, Type H-1.

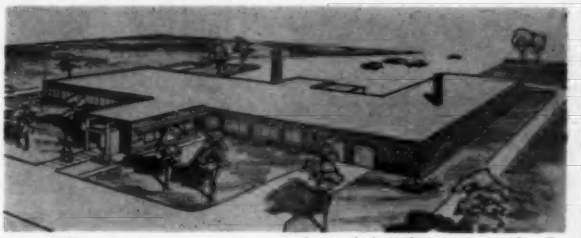
.....**GEC-1411**—Halogen Leak Standard for calibrating the Halogen Leak Detector.

NAME_____ **TITLE**_____

COMPANY_____

STREET_____ **STATE**_____

Seaquist Announces Expansion of Cary Plant



Seaquist Manufacturing Corp., Cary, Ill., last month announced an addition of 8000 square feet to its aerosol valve manufacturing plant in Cary, Ill. According to the initial company announcement, the expansion was made necessary because of a growing demand for the company's "750-NN" aerosol valve.

The entire factory, and offices are air conditioned, and included in the addition is a new research laboratory for customer service work, and for the testing of valve designs. In the same building is the tool room of the Werner Die & Stamping Co., where molds and automatic assembly machines are made for the manufacture of valves.

Household Aerosol Booklet

A new illustrated brochure on the subject of household space aerosols was issued last month by Rohm & Haas Co., Philadelphia, manufacturer of "Lethane." Dealing principally with "Lethane," which is described as "the first synthetic organic insecticide and one of the most popular for aerosol application," the booklet gives detailed information on the insecticide's chemical and physical properties, plus formulation recommendations, specimen labels, and biological performance data.

"In our opinion this new brochure is the most comprehensive study of this field ever offered for aerosol formulations," declares Carlos Kampmeier, head of the company's Agricultural and Sanitary Chemicals Department.

Designated as form SAN-404, the brochure is available on request to the company at Washington Square, Philadelphia 5, Pa.

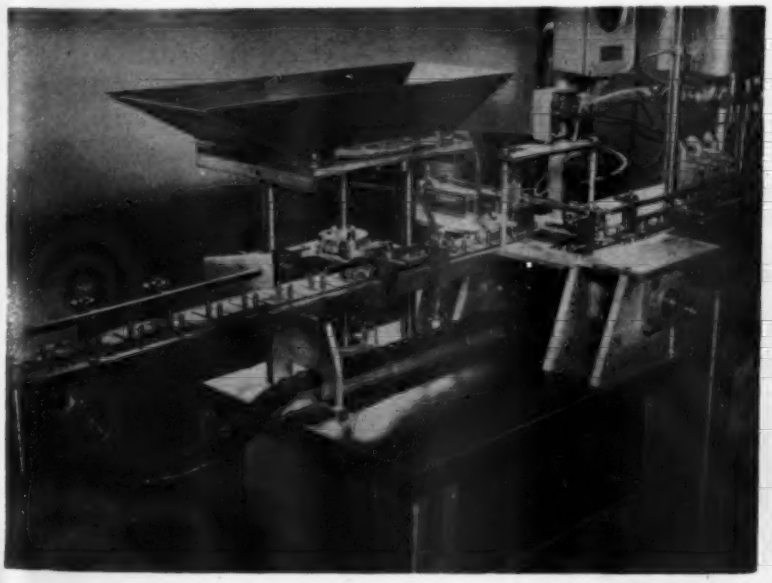
•

John Craig in New Post

John J. Craig, former senior associate editor of *Chemical Week*, has been elected vice-president of W. Alec Jordan Associates, New York, chemical business counseling firm. Mr. Craig's most recent position had been as an executive with G. M. Basford Co.

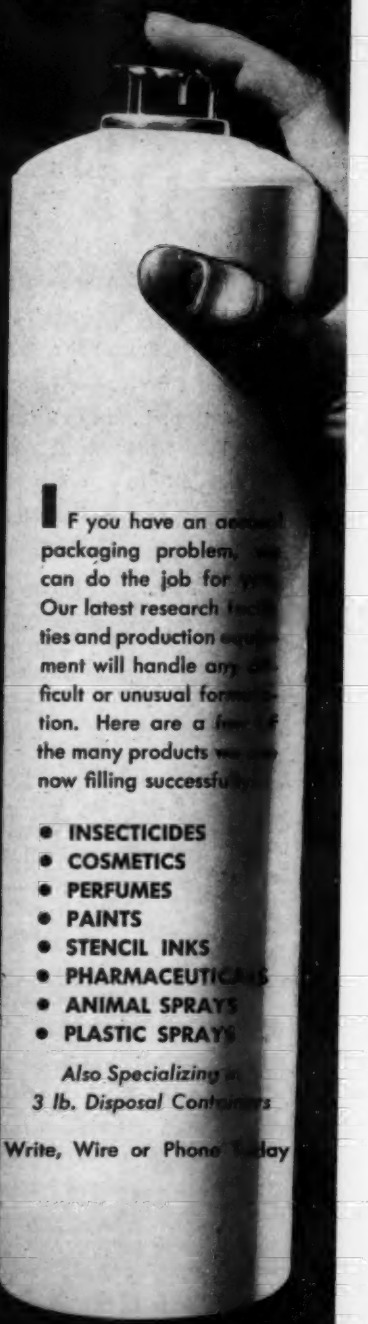
Mojonnier Develops Automatic Pellet Dropper

A new machine that automatically feeds an agitator pellet and codes the bottom of cans has been developed by Mojonnier Associates, Inc., Franklin Park, Ill. The machine is said to eliminate the need for a person on the line feeding the agitator pellet, since with this unit it is possible for the same worker to load cans on the unscrambler and replenish the pellets in the hopper. Mojonnier reports that the new unit is expected to be particularly applicable to aerosol paint filling lines.



Specialists in Small Run

AEROSOL PACKAGING



IF you have an aerosol packaging problem, we can do the job for you. Our latest research facilities and production equipment will handle any difficult or unusual formulation. Here are a few of the many products we are now filling successfully:

- INSECTICIDES
- COSMETICS
- PERFUMES
- PAINTS
- STENCIL INKS
- PHARMACEUTICALS
- ANIMAL SPRAYS
- PLASTIC SPRAYS

Also Specializing in 3 lb. Disposal Containers

Write, Wire or Phone Today

NATIONAL SPRAY CAN FILLING CORP

1238 EAST 14th STREET
BROOKLYN, N. Y.

Phone Cloverdale 2-2730

NIMCO BRAND

FOR AEROSOL HAIR AND SHAVING PREPARATIONS, SHAMPOOS, PHARMACEUTICALS

ETHOXYLAN®

An improved WATER and ALCOHOL SOLUBLE Lanolin Derivative

Here is a lanolin product that will give your preparations superior emollience in a large variety of applications at minimum cost, without lanolin's greasy effects.

ETHOXYLAN is available in two forms —check these advantages:

ETHOXYLAN 100

- Anhydrous solid—100% soluble in water; sufficiently soluble in alcohol as an additive to aerosol hair products.
- Compatible with standard propellants and film foaming materials.
- Will not clog or produce usual sticky film of lanolin.
- Imparts emollience, softness and lustre.
- Surface active; foam enhancer.
- Produces crystal clear solutions.
- Non-irritating.

ETHOXYLAN 50

50% active ingredient crystal clear aqueous solution.

Either way, you should check the benefits of ETHOXYLAN —write for BULLETIN and SUGGESTED APPLICATIONS.

N. I. MALMSTROM & CO.

America's Largest Processor of Wool Fat and Lanolin

147 Lombardy Street, Brooklyn 22, N.Y.

SALES AGENTS

COMMERCIAL CHEMICALS, INC.
211 Hertel Avenue,
Buffalo 7, N. Y.

R.I.T.A. CHEMICAL CORP.
612 N. Michigan Ave.,
Chicago 11, Ill.

FULLER ASSOCIATES
616 St. Clair Ave., N.E.,
Cleveland 14, Ohio

R. E. FLATOW & CO.
10 Madison Street,
Oakland 7, Calif.

R. E. FLATOW & CO.
15 No. Euclid Ave.,
Pasadena 1, Calif.

Who's Who in the Aerosol Industry

E. F. Helfer, one of the developers of the first aerosol production line, is today president of his own company, Powr-Pak, Inc., of Bridgeport.

Mr. Helfer received his B.M.E. from New York University. His Masters Degree in mechanical engineering was interrupted by World War II. After the war, he joined the Bridgeport Brass Company's Aerosol Department where, as production engineer, he helped set up the first high pressure aerosol filling line to serve civilian needs.

He left Bridgeport Brass in 1947 to go with Bostwick Laboratories and the Connecticut Chemical Research Co., serving as vice president in charge of production and on the board of directors of both companies. It was while at Bostwick Laboratories that he set up what has come to be widely acknowledged as the world's first low pressure aerosol filling line. At Bostwick, his duties included training inexperienced executive and supervisory personnel in aerosol techniques.

In 1950 Mr. Helfer left Conn. Chem. to form his own company and in his very first year with Powr-Pak, the company did a $100,000 volume from a 5000 square foot plant. In 1956 Powr-Pak's sales reached over $2-million and plant facilities have been expanded to 40,000 square feet. Production includes cosmetics, pharmaceuticals, insecticides, deodorants and other chemical specialties. Mr. Helfer and his staff pride themselves on being able to handle small or large production runs, cold or pressure filling, foam- or liquid filling in any available aerosol container. They also have fully staffed and equipped research and control laboratory facilities.

Well known in the aerosol industry, Ed Helfer has written many articles on a number of aerosol

topics and is specially noted for his knowledge of production line techniques.

Douglas Atlas, of G. Barr and Co., Chicago, although he's vice president of a company that doesn't market or label its own products, is as versed in matters of consumer sales as he is in laboratory science and business administration. This versatile background in the drug and cosmetic industries is Mr. Atlas' principal working tool in dealing with manufacturers for whose labels Barr fills, and often formulates, aerosol products.

In 1941, Mr. Atlas was graduated from the University of Chicago with a B. S. degree in chemistry. In 1943, he was commissioned a weather officer in the Army Air Force, after completing bachelor's degree training in meteorology. In the college-military interim, he worked in the famous Manhattan Project, building atomic piles for the tests that led to the first sustaining atomic chain reaction.

Laboratory background plus a fascination with the business side of chemistry led Mr. Atlas to a post-war job with a pharmaceutical manufacturer in St. Joseph, Missouri, for whom he set up a manufacturing laboratory for some 35 injectible medical products. Two years later, he returned to Chicago convinced that chemical manufacturing was his field and that Chicago was the place for opportunity in it.

In 1948, he joined Marcelle Cosmetics, Inc., manufacturers and marketers of a complete line of cosmetics for sensitive or allergic skins. In three years, he became vice president, and within five years, Marcelle's volume had increased nearly 100%. As head of the firm's 17-man sales force, he saw duty in marketing and advertising, and also coordinated production with laboratory developments.

Since 1954, when he joined G. Barr and Co. as vice president, he has headed sales and assisted George Barr, president, in over-all management responsibilities. This includes coordination of the company's three-plant operation in Chicago, Los Angeles, and New York. In his contacts with the firm's manufacturer-customers, Mr. Atlas constantly taps his own broad background in the fields of product formulation, production, and point of sale.

He is presently a member of the CSMA's products survey committee, and is a past chairman of the Chicago section of the Society of Cosmetic Chemists.

Aerosol bouquets

that have proved their effectiveness in the production of industrial and consumer products

MINT BOUQUET.....No. 3121
APPLE BLOSSOM...No. 3122
OIL SWEET PEA.... No. 3123
OIL WISTARIA.....No. 3124
OIL GARDENIA..... No. 3125
OIL BOUQUET E.T. No. 3126
OIL BOUQUET P.C. No. 3127
OIL BOUQUET H.D. No. 3128
OIL BOUQUET K.L. No. 3129
OIL BOUQUET H.C.S. No. 3130

From the Research Laboratories of

Florasynth LABORATORIES, INC.

EXECUTIVE OFFICES: 900 VAN NEST AVE., (BOX 12) NEW YORK 62, N.Y.
CHICAGO 6 · LOS ANGELES 21
Cincinnati 2 • Detroit • Dallas • Memphis • New Orleans 12
St. Louis 2 • San Francisco • San Bernardino
Florasynth Labs. (Canada Ltd.) • Montreal, Toronto, Vancouver, Winnipeg
Agents & Distributors in Mexico: COMSOLMEX S. A. Mexico 11, D. F.

ARE YOUR PRODUCTS SELLING IN PROFITABLE VOLUME TO —

- ☐ Hospitals
- ☐ Hotels
- ☐ Restaurants
- ☐ Office Buildings
- ☐ Schools
- ☐ Manufacturers
- ☐ Greenhouses
- ☐ Garages
- ☐ Clothes Cleaners
- ☐ Upholsterers
- ☐ Farmers
- ☐ Food Processers
- ☐ Nurseries
- ☐ Armed Forces
- ☐ and many other Volume Users

Standard Sizes
55, 75 and 132 Cu. In.
Other sizes on request
240 lb. Working Pressure
I.C.C. Approved

HOW TO INCREASE SALES WITH KING SIZE T-M-C AEROSOL CONTAINERS

If you manufacture fluid, semi-fluid or powdered materials you can now sell the volume users with TMC KING SIZE Aerosol Containers. They give you the proven sales appeal of aerosol convenience in KING SIZE dispensers. It pays to sell quarts instead of ounces. When you make your products easier to use—people use more of it! It deserves looking into... write or phone for your personal copy of "The Latest Thinking on Marketing under Pressure."

TMC

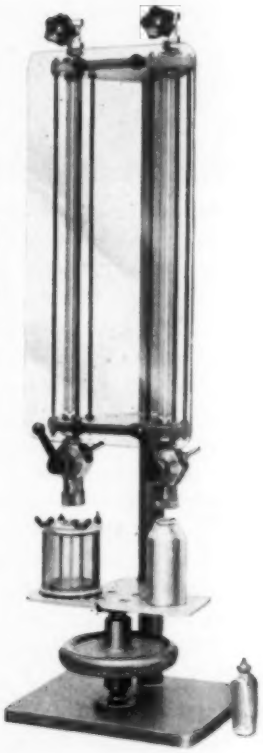
TUBE MANIFOLD CORPORATION
419 Bryant St. LUdlow 7900 N. Tonawanda, N.Y.

druk pak inc.

36, Merkur Strasse
Zurich, Switzerland

Supplying internationally for aerosols

- Laboratory Equipment
- Filling Machines (Cold and Pressure)
- Valves (Liquid and) Foam/Cans and Glass Bottles)
- Product Concentrates
- Laboratory Service
- Advice and Consultation



Laboratory Filling Apparatus — DP-101

All Products manufactured to our own Designs, Formulations and Patents. Valves available from Germany and Italy—Filling Machines from Germany—Laboratory Equipment and Concentrates from Switzerland.

Publishers of "European Aerosol Survey," a quarterly periodical

Catalogues and Prices on Request.

Plastic-Coated Glass

(*From Page* 55)

venting area, and if they are of sufficient area the jacket will not approach the elongation limit. In addition to the obvious advantage of a large venting area the vents do not deface the jacket, which is again an important item in cosmetic packaging.

"Still vents, though relatively inconspicuous, do not have the positive action of round holes unless they are quite long. When slit venting is used, it has been found that expansion of the jacket is accompanied by actual tearing of the slits, which is undesirable. Therefore, it is preferable to use round holes."★

The Security Factor

(*From Page* 28)

it. If you have many products, do it yourself, even though the volume may be less. In this case, flexibility is as important as the quantity.

The installation of a packaging line against the use of a custom filler can always be measured against the financial yardstick which is the required investment plus inventory.

Very simply, the problem reduces itself to the question of whether it is more desirable for an individual manufacturer to use funds that might be used for a packaging line for sales and general operation. The decision must inevitably be measured in dollars.★

A number of other opinions on this subject, received too late for inclusion in this issue, will be printed in succeeding months.

New Sun Tube Unit

(*From Page* 31)

3. Two spray actuator designs, one a conventional button type, and the other having a skirted portion which covers completely the inner dome of the one inch mounting cup.

Banking heavily on these three assets — improved production techniques (mainly by use of the radical new assembly unit), strict quality control, and these specification sheets, Sun Tube may well achieve its objective — that of quickly becoming a major factor in the valve industry.★

Lanolin for AEROSOLS

(*From Page* 49)

They range from dispersing and emollient agents in lipsticks, to biological or active ingredients in hair tonics, and from basic constituents of eyebrow pencils to active or stabilizing agents in face and hair creams. Add to all of these the other new uses as plasticizers and "dry" film forming and hair conditioning agents for aerosol hair sprays and one becomes better aware of the value of lanolin preparations to the cosmetics field.★

Flowed Gaskets

(*From Page* 47)

other special products for the packaging field. Some of its early work was on the development of a flowed gasket for a Navy mine arming device. Specifications called for a gasket on a smooth untracked metal surface, one without glue or possible slippage. The problem was solved successfully with a new pressure technique developed specially for this one purpose.

Another government job Bristol had was the gasketing for the inside cover of a pocket dosimeter for the detection of radiation in the air. This was for the Atomic Energy Commission.

The major product the company is currently turning out (next to aerosol mounting cups) is a rubber gasketed paint can cover for American Can Co. These covers, being produced in a variety of sizes, are shipped by Bristol to points as far away as the West Coast. Here, too, the flowed gasket seems to have suc-

Quality
AEROSOL FILLING

Esko welcomes inquiries from custom and private marketers regarding product development and custom and contract filling.

WE WILL FILL ONLY FOR CUSTOMERS AND MARKET NO LINE OF OUR OWN

It's our belief that the customer best can be served by our working exclusively for him.

Formulations which we have already developed can be made available to our clients.

Esko CHEMICAL CO.

352 Livonia Ave.
Brooklyn, N. Y.
Phone: Dickens 2-5205

Long Run or Short Run?

In racing it makes a difference. What you would expect in a short 100 yard dash and the longer mile run are very different. In the shorter race you want a man with a fast start, the longer run calls for staying power.

In aerosol packaging, too, it makes a difference what kind of a run you have to make. You may require immediate delivery of a small quantity or a steady shipment of thousands of cans daily.

At Powr-Pak, both the small quantity man and the big production customer are satisfied. We can make either run. Whether your product be a foam or a liquid, whether it requires cold or pressure filling, we can answer your requirements.

We can effectively package pharmaceuticals, insecticides, cosmetics, deodorants and numerous other chemical specialties. We can fill any kind of aerosol container.

Our experience and our flexibility make it possible for us to answer all your aerosol packaging needs. Write for our facilities report.

POWR-PAK, INC.

647 North Avenue, Bridgeport, Conn. • Phone FO 7-6495

SEE US AT THE CSMA CHICAGO SHOW

cessfully solved the problem of how to apply a permanent gasket without the obvious defects that would result from gluing.

Still another of the company's activities may be devoted to an entirely new field — rubber and metal caps for the standard medical dosage bottles. Bristol recently perfected a new aluminum cap that will allow gasketing and still meet strict government standards for sterile caps.

But it is for the aerosol valve industry that the company is aiming its current expansion plans. Using high-speed production techniques and stepped-up inspection as major selling points, The Bristol Flowed Gasket Co. expects to considerably enhance its position in the field.★★

Aerosol Publicity

(*From Page* 59)

4. To explore new markets for aerosol products.
5. To establish a recognized central industry source of information on aerosols.

Techniques

The hard core of the program will be a broad campaign of placing editorial material in magazines and newspapers serving the mass of present and potential users of aerosol-packaged products. Media of prime importance here are household and shelter magazines; women's magazines; outdoor publications; national science publications; company house organs; national wire services; metropolitan and suburban newspapers; and Sunday newspaper supplements.

In addition to this kind of publicity, aimed directly at housewives and do-it-yourselfers, some effort will be put toward publicity in publications serving the institutional field—hotels, restaurants, schools, and hospitals.

Raw material from which this kind of news and feature publicity is developed must come from the principals in the industry who are pacing its progress. A system is being established for gathering and channeling information on new products, research, production techniques, and

PACKERS

The leading custom and contract fillers operating in your area are listed on the following pages.

EAST

AEROSOL IMAGINATION
•
AEROSOL CREATION
•
AEROSOL REALIZATION

Exclusively private label manufacturer of aerosol cosmetics, pharmaceuticals and chemical specialties.

AEROSOL TECHNIQUES
INCORPORATED
111 Silliman Ave., Bridgeport 5, Conn.
Telephone Edison 6-0176

AEROSOL FILLING
Contract and Private Label
- Cosmetics
- Creams
- Powders
- Foams
- Paints

AEROSOL and LIQUID FILLING
COMPLETE PRODUCT DEVELOPMENT LABORATORY
PRODUCTS MANUFACTURING CO.
735 Stevens Ave. Little Falls, N. J.
Tel.: Little Falls 4-1910

AEROSOL PACKAGING
- Contract Filling
- Private Label Service
- Small or Large Runs
- Complete Shipping Service

SHIELD CHEMICAL CO., INC.
50 Brook Road
Needham Heights 94, Mass.
Tel.: NE 3-1433

EAST

Our 57th Year
A-M-R CHEMICAL FOR AEROSOLS
CONTRACT PACKAGING | PRIVATE LABEL FORMULATION
— Insecticides, room deodorants, coatings, hair sprays, cosmetics and a complete line of chemical specialties for home and industry
Bulk Storage Facilities
A-M-R, 985 E. 35th St., Brooklyn, N Y
CLoverdale 3-8300

STALFORT
OF PA., INC.
Aerosol Filling
for Contract and Private Label Marketers
Cosmetics — Pharmaceuticals
Paints — Insecticides
Miscellaneous Liquids
Foams — Powders
Also Liquid Filling
Complete Laboratory Facilities
Norristown, Pa. BRoadway 5-4355

To All Buyers of
AEROSOL PRODUCTS:
Here are the advantages of a modern manufacturing plant built upon a foundation of over 30 years experience:
1. Contract fillers of both bottles and cans.
2. Pressure and "Cold Fill" facilities.
3. Modern up-to-date, compounding facilities.
4. Complete research and control laboratory.
5. Free product development and sampling.
6. Free Products Liability Insurance.
7. Centrally located plant.
8. Our modern materials handling and shipping rooms can also handle your drop-shipments.

ASSOCIATED BRANDS, INC.
35 CLAVER PLACE, BROOKLYN 38, N. Y.
Tel. Main 2-1030-1031-1032

EAST

AEROSOL PACKAGING
Small and large runs cosmetics, pharmaceuticals, insecticides, deodorants, specialties.
POWR-PAK, Inc.
647 North Ave., Bridgeport, Conn.
FOrest 7-6495

Specialists in Small Run
AEROSOL PACKAGING
If you have an aerosol packaging problem, we are set up to do the job for you. Here are a few of the many specialized products we are now filling successfully:
- INSECTICIDES
- COSMETICS
- PERFUMES
- PAINTS
- STENCIL INKS
- ANTIBIOTICS
- ANIMAL SPRAYS
- PLASTIC SPRAYS

If it can be sprayed — we can help you!
NATIONAL SPRAY CAN FILLING CORP.
1238 East 14th St., Brooklyn, N. Y.

FLUID CHEMICAL CO., INC.
Ist in Contract Packaging
★ Aerosols
★ Liquid Filling
878 MT. PROSPECT AVE.
NEWARK, N. J.
HUmboldt 5-2880

Old Empire
AEROSOL FILLING
AEROSOL CONCENTRATES
SHAVE CREAM
HAIR LACQUER
COSMETIC SPECIALTIES
PHARMACEUTICAL
SPECIALTIES
MT. PROSPECT & VERONA AVES.
NEWARK, N. J. • HUMBOLDT 4-2121
N.Y.C. WORTH 4-7870

The first name to think of for the **last word** in
CUSTOM and CONTRACT FILLING
of all types of aerosols
•
STALFORT
Pressure-Pak Corp.
321 W. Pratt St., Baltimore 1, Md.

Protect Your Priceless Name!
CONN-CHEM
PRESSURE PACKAGING SPECIALISTS
Talk with our Technical Advisors.
No obligation on your part.
CONNECTICUT CHEMICAL RESEARCH CORP.
Bridgeport 5, Conn. Forest 8-2511

COMPLETE CUSTOM LOADING SERVICE
Exclusively Private Label Manufacturer of Aerosol Cosmetics, Pharmaceuticals and Chemical Specialties
PRODUCTION IN ANY QUANTITY
AEROSOL METHODS
Ridge & Allentown Rd., Tylersport, Pa.
Phone ALpine 7-6032

marketing strategy, to the Steering Committee and the agency.

TV Motion Picture

The first year's publicity program provides for the creation and production of a five-minute motion picture on aerosols, and its distribution to television stations across the country. Prints of the film, in color or black and white, will be available to any company wishing to use it for promotional or educational purposes.

Merchandising Publicity

It is expected that the publicity program will produce news and editorial features that will be most helpful, in reprint form, as sales promotion ammunition for individual company use, and these will be made available as they materialize.

Advertising Support

Publicity ideas and themes developed as the program unfolds should furnish tie-ins to alert member companies for their individual advertising and direct mail campaigns in support of the industry's efforts. It is the intention of those guiding the aerosol publicity program to have the industry-wide publicity on aerosol packaging work hand-in-hand with individual company promotion of proprietary aerosol products, so as to add impact and momentum to the growth of aerosol sales.

Internal Industry Communications

The Aerosol Publicity Steering Committee will meet regularly with Basford's publicity account executives to guide their efforts, channel information, and receive reports on progress being made. Written reports of accomplishments and projects underway will be distributed periodically to all interested companies in the industry.

This is the program on which the aerosol industry has embarked. While its beginnings are on a modest scale, we expect that the first year's results will point the way to a more ambitious program, in which many other proven techniques and special projects can be employed and supported wholeheartedly by the fast growing aerosol industry.★

Pressure Filling

(*From Page 34*)

Air can be saved by checking and preventing leakage, and also by reducing the pressure wherever possible (i.e. as on the return stroke of large volume cylinders). Air can be used to the advantage of the packager wherever it will simplify an otherwise costly or complicated problem; and propellant can be very efficiently pumped by air.

OF the several methods of propellant pumping, each has its merits. However, the simplest and most economical in our experience is the use of a reciprocating air-operated pump. The pump must not be "starved," so that if it is feeding from one ton drums it should either feed from several at the same time or the cylinder should be warmed on the feed side to increase the internal pressure.

Close to the injector a properly charged accumulator of ample size must be installed. This will maintain sufficient pressure on the propellant to avoid "flashing" when either the injector or the feed pump are recuperating their supply.

When the pump is fed from a bulk tank where the suction side has ample supply, a hydraulic "bumper" will be needed. This will absorb line shock and prevent damage to the suction line or the pump.

Looking over past experience in filling lines we find that the handling of valves has been one of the most costly and difficult-to-solve problems. One company recently developed a machine to insert the valve and dip tube into the container as it was being conveyed on an automatic line. This was first accomplished by feeding the "locating inserts" from a manually-loaded chute or track.

This device was partially satisfactory, as it reduced both operator fatigue and labor costs. Automatic hoppering is currently being tried and is succeeding as the various "bugs" are ironed out.

Mounting cups can be handled in a "Syntron" at rates in excess of

200 per minute, and once oriented in the chute or slide will be conveyed to the dip tube applicator and thence to the container on the filling line.

With this technique, all that will be necessary is one operator on the high speed lines, since on most lines this valve feed could be just another point for the operator to watch while performing other duties. The dip tubes will be handled in rolls, from which they will be fed to the sizer-cutter-applicator section of the machine. The only warehoused item which might still need various stock types will be the mounting cups (for the various metering orifice sizes).

In the future our engineers are planning development of a rotary type injector with a capacity of 200 cans per minute.

All these developments will contribute greatly toward further modernization and automation of pressure filling, and of the aerosol industry as well.★

Gibberellic Acids

(*From Page* 43)

characterized by excessive plant elongation, lodging, and reduced yields.

Japanese scientists' early work on prevention of the disease revealed the typical elongation of plants grown in sterilized media in which the fungus had been cultured. The chemicals responsible for the unusual growth were isolated, and scientists turned to research on the substance in plant-growth studies.

THE general properties of gibberellic acid, as they apply to its use on plants should be of some interest here. The acid is soluble in acetone, ethanol, and water in amounts greatly in excess of those required to influence plant growth. It is stable in water for short periods, and this stability is not affected by pH over a wide range. It is also quite stable in organic solvents. All of these factors serve to simplify most formulation problems.

Regardless of where applied, gibberellic acid formulations are readily

EAST

Quality
AEROSOL FILLING
we will fill only for customers and market no product line of our own
Esko CHEMICAL CO.
352 Livonia Ave.
Brooklyn, N. Y.
Phone: Dickens 2-5205

Complete Facilities for All Types of
AEROSOL PACKAGING
Custom and contract fillers, warehousers and shippers of pharmaceutical and chemical specialties.
MODERNAIRE TECHNIQUES
Laboratories and Plant
Attica, N. Y. Phone Attica 777

MIDWEST

EVEREADY
for
AEROSOLS
complete private brand packaging
EVEREADY PRESSURIZED PRODUCTS, INC.
1101 BELT LINE ST. • CLEVELAND 9, OHIO

PETERSON
FILLING & PACKAGING CO.
•
Contract Aerosol and Liquid Filling
PHONE: 1400
HEGELER LANE
DANVILLE, ILL.

MIDWEST

CALL
CONTINENTAL
FOR
Quality and Service in Aerosol Custom Filling
CONTINENTAL FILLING CORP.
123 N. HAZEL • DANVILLE, ILL.

AEROSOL PACKAGING
to fit
YOUR
PRODUCT

• No minimum run required and no maximum limit! Rigid quality control is maintained on all production, contract filling or custom packaging.
CHASE PRODUCTS CO.
Maywood, Illinois

AIROSOL COMPANY, INC.
Inventor of the Low Pressure Process
Now offers custom filling for all types of aerosol products
In the geographical center of the U. S.
— save freight —
Airosol Company, Inc.
525 North 11th Street
Neodesha, Kansas

Aerosol Packaging
Specializing in
AEROSOL PAINTS
Enamels - Lacquers
Wrinkle and Hammertone Finish
Custom Filling
or
Private Label
Complete Aerosol and Paint Laboratory Facilities
Cleveland Aerosol Packaging Corp.
9801 HARVARD AVE., CLEVELAND 5, O.

MIDWEST

PRIVATE LABEL AEROSOLS

Leadership earned through outstanding aerosol research laboratories . . . creative product development . . . meticulous quality control . . . effective production economies. G. Barr & Co. markets no products of its own.

THREE PLANTS TO SERVE YOU
New York Chicago Los Angeles
Address all inquiries to:
G. BARR & CO.
3601 So. Racine Ave., Chicago 9, Ill.

CHECK
Lenk FIRST!
AEROSOL CUSTOM FILLING
SPECIALISTS IN
PRESSURE PACKAGING
THE LENK COMPANY
FRANKLIN, KENTUCKY

Increase your sales
by pressurizing your product

- *Quality Production*
- *Confidential Product Development*
- *Top Research and Formulation Staff*

Special Department For Limited Quantities
Gene Rose company, inc.
1637 S. Kilbourn Ave., Chicago 23, Ill.

We can do your
Cold or Pressure
CUSTOM FILLING . . BUT
equally important, as a long-time manufacturer of our own complete line of aerosols we can provide valuable marketing, merchandising and product development assistance. This "know-how" is part of our service which includes the most versatile and flexible aerosol plant in the country. We can easily and economically handle any type of spray, foam, residual or mechanical break-up product—in any quantity from 100 to 1,000,000. Write, wire or phone today!
Gard Industries, Inc. Wilmette, Ill.

FAR WEST

CUSTOM PACKERS
Manufacturing Chemists
•
The west's oldest and most experienced aerosol fillers
•
WAREHOUSING — SHIPPING
COLD & PRESSURE FILLING
•
PAR INDUSTRIES, INC.
2193 E. 14th ST., LOS ANGELES, CALIF.

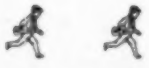
CALIFORNIA'S LARGEST AEROSOL FILLER
Compare our
★ PRICES
★ QUALITY
and CONFIDENTIAL SERVICE
WESTERN
FILLS *ALL* PRODUCTS
WESTERN FILLING CORPORATION
4151 BANDINI BLVD., LOS ANGELES

CANADA

CUSTOM FILLING
in
CANADA
- Research
- Development
- Manufacture

Connecticut Chemicals (Canada) Limited
Cutity Ave. and Hollinger Road — Toronto 16 Canada

Are you missing a big Opportunity?



Your advertisement in this space will be widely seen throughout the packaging, cosmetic, food, pharmaceutical, paint and insecticides industries.

absorbed by plants—either through the roots from nutrient solutions or through the stems and leaves in alcoholic or aqueous solutions, or in lanolin suspensions.

Plant scientists are impressed by the high degree of mobility within the plant itself—a property that often produces responses at points considerably removed from the site of application. Thus, a drop of the acid placed at the base of the stem is soon evidenced by increased elongation of internodes above the treated area.

Gibberellic acid produces many of these growth responses in extremely small dosages—as little as one-millionth of an ounce of the acid in one ounce of water has a stimulant effect on some plants. On the other hand, dosages of 100 micrograms or even more seem to have essentially the same effect as the lower rate.

There are still a number of questions to be answered before plant scientists will completely accept indiscriminate use of this plant "wonder." Toxicity problems with high concentrations of the acids in certain plants need further study, and more work has to be done on *which* plants will react favorably under treatment with the material.

The current manufacturers and suppliers of gibberellic acid include Abbott Laboratories, Chicago; S. B. Penick & Co., New York; Eli Lilly Co., Indianapolis; Merck & Co., Rahway, N. J., and Chas. Pfizer Co., Brooklyn.

The industry is watching the success of the first aerosol products in the plant growth stimulant field and the endeavors of plant scientists to more accurately estimate what the hullabaloo is all about.★

At the CSMA meeting in Chicago May 20-22, Pennsalt Chemicals will distribute samples of aerosol-packaged "Gibrel." These packages will be two-ounce sample-sized Wheaton coated glass containers, equipped with VCA metered valves, and will deliver five micrograms of the substance with each squirt.

New Aerosol Patents

The data listed below is only a brief review of recent patents pertinent to the readers and subscribers of this publication.

Complete copies of these patents may be obtained by writing to the publisher of this magazine, Aerosol Publications, Box 31, Caldwell, N. J., and remitting 50c for each copy desired. For orders received outside of the United States the cost will be $1.00 per copy.

2,788,150. Machines for Labelling Bottles and the Like. Patent issued April 9, 1957 to Alfred German Rose, Gainsborough, England, assignor to Rose Brothers (Gainsborough) Ltd., Gainsborough, England, a British Company.

A machine for labelling cylindrical bottles and like articles comprising a rotatable label-carrying drum formed with a plurality of suction apertures spaced around its periphery, said drum being of substantially narrower width than the bottles, means for applying suction to the apertures for seizing the labels in succession, a magazine for receiving a stack of labels, said magazine being arranged adjacent the drum with its base substantially tangential to the drum, a pivoted suction member formed with two suction nozzles arranged one on each side of the drum, the suction member being arranged to operate in timed relationship with the movement of the drum to seize the leading portion of the lowermost label in the stack and deflect it on to the surface of the drum for it to be seized by the adjacent suction aperture and, upon movement of the drum, to be withdrawn from the magazine, leaving the label overhanging on each side of the drum, means for rendering the outer face of each label adhesive while it is held on the drum, a presser member adapted to move transversely of the periphery of the carrier towards the non-adhesive side of each label in succesion to an operative position to present a stationary supporting surface substantially tangential to the periphery of the carrier and extending substantially paralled to the axis of the carrier against which surface an overhanging portion of the label may be pressed while it is held on the carrier, and means for rolling an article over the surface to cause such pressing and initiate the application of the label to the article.

2,788,924. Beaded-Stem Dispensing Valve for Gas-Pressure Containers. Patent issued April 16, 1957 to Jack W. Soffer, St. Louis, assignor to Development Research Inc., St. Louis, a corporation of Missouri.

A rockable tubular dispensing valve member adapted for mounting within a resilient sleeve within an aperture in a gas-pressure container, comprising a tubular stem member having a valve head portion closing its inner end, a discharge spout opening at its outer end, a lateral port adjacent the valve head and adapted to permit communication with the stem portion when the valve head portion is displaced from closed position, further having an outer cylindrical surface axially outward of said lateral port extending a width greater than the depth of the aperture of such container, and adapted to be sealedly encompassed by such sleeve at the level it passes through such aperture and an annular bead extending radially from said surface at a point outward of such lateral port and inward of such aperture and adapted to distend such resilient sleeve adjacent the inner side of container aperture and seal such resilient sleeve thereagainst despite relative rocking movement of said valve member, together with a second annular bead spaced outwardly along such outer cylindrical surface axially outward from said first annular bead a distance greater than the thickness of the container aperture and adapted to distend such resilient sleeve adjacent the outer side of the container aperture and seal such resilient sleeve thereagainst.

2,790,285. Secondary Closures. Patent issued April 30 to Charles O. Pike, Troy, N. Y., and James E. Snyder, Akron, Ohio, assignors, by mesne assignments, to The Goodyear Tire & Rubber Co.

The process of shrinking and adhering a heat-shrinkable, tubular secondary closure onto the neck of a container in which is an opening closed with a primary closure, with a thermally activatatable adhesive between the secondary closure and the neck of the container, which process includes heating the secondary closure and the adhesive, thereby shrinking the secondary closure onto the neck of the container and simultaneously rendering the adhesive tacky and whereby the secondary closure by shrinking squeezes the adhesive tight against the neck of the container.

Professional Directory

Lancaster,
Allwine
&
Rommel

Registered Patent Attorneys

Suite 428,
815 — 15th STREET, N. W.,
Washington 5, D. C.

Patent Practice before
U.S. Patent Office

Validity and Infringement
Investigations and Opinions

Booklet and form
"Evidence of Conception"
forwarded upon request.

bio-assay
INSECTICIDE AEROSOL

- *formulation performance*
- *label claims*
- *mammalian toxicity*

WISCONSIN ALUMNI RESEARCH FOUNDATION
INSECTICIDE TESTING LABORATORY
P. O. BOX 2217-DD
MADISON 1, WIS.

AEROSOL PRODUCT DEVELOPMENT

Consulting — Research — Testing

The Safest Path to Successful Products

THE REED RESEARCH CORP.

formerly Aerosol Process Co., Inc.

Winston H. Reed, Ph.D., President and Technical Director

Mill Street, Shelton, Conn.

Phone Ansonia-Derby—REgent 5-4858

CONFIDENTIAL UNBIASED

The only Company devoted exclusively to development and research on Aerosols

W. Alec Jordan

Chemical Business Counsel

- Marketing Analyses
- Product Development
- Evaluation of Purchasing Determinants

270 Park Ave., New York 17, N. Y.

PL 5-9345

Trade Mark Applications

Applications for registration of the following trademarks were published in recent issues of the *Official Gazette* of the U. S. Patent Office. In not all cases are there strictly aerosol trademarks, however many of the products listed below come within the category of those for which a possible future use in aerosols is foreseen.

FRAM, in solid capitals, for deodorant and antiperspirant for human use. Application filed Nov. 25, 1955 by A. & F. Pears Ltd., Isleworth, England. Priority dated July 15, 1955.

HIDE-A-MARK, in solid capitals, for liquid material sold in individual spray dispensers and used to obliterate markings on any surface, for the purpose of re-using crates, cartons, drums, and other containers. Filed April 20, 1956 by Krylon, Inc., Norristown, Pa., with first use claimed March 7, 1956.

N-TOMIC MIST, for insecticides, in capitals in a cloud-shaped outline. Filed March 2, 1956 by Robert Johnson, d.b.a. N-TOMIC Products, West Orange, N. J. Claims first use Jan. 13, 1956.

SPRADEO, in solid capitals, for nonpersonal deodorant for use in deodorizing household, industrial and other enclosures and the contents thereof. Filed Sept. 12, 1956 by Tech Soap Manufacturing Co., Chicago, Ill., with first use claimed Aug. 14, 1956.

GOLD 'N' LITE, in capitals, for hair lightening preparation. Filed Aug. 17, 1956, with first use reported April 1954, by The Nestle-Le Mur Co., New York.

BIG SQUIRT, in capitals, for windshield cleanser. File April 12, 1956 by Demert & Dougherty, Inc., Chicago, Ill., with first use claimed on or about July 1, 1951.

Lasthuysen in New Post

Willem Lasthuysen has been appointed technical director of the Aromatics Division of Rhodia, Inc., New York. He was formerly senior perfumer with the Colgate-Palmolive Co. and earlier was chief chemist of Dodge & Olcott, Inc.

Mr. Lasthuysen was also affiliated with the Great Atlantic and Pacific Tea Co.

Acrolite Names Distributor

Acrolite Products, Inc., West Orange, N. J., have announced the appointment of Van Son Holland Ink Corp. of America, Mineola, N. Y. as distributors for "Ink-O-Saver" and other aerosol graphic arts products for the offset and duplicator fields.

A Correction

The April issue of AEROSOL AGE carried a news story on a special cooperative advertising campaign begun recently by Velsicol Chemical Corp., Chicago, to publicize chlordane formulations. Although the story gave the impression that the campaign was to be a national campaign, it actually was aimed exclusively at pest control operators and covered only the February issue of *Pest Control* magazine.

PROPELLANT STORAGE

and

Handling Systems

- Complete engineering and equipment services for the bulk storage and handling of propellants and related products.

DOYLE & ROTH MFG. CO., Inc.

136-150 Twenty-fourth Street
Brooklyn 32, New York

Pennsalt Makes First "Isotron" Delivery

James Bampton (L) president, Stalfort of Pa., Inc., Norristown, Pa., welcomes Frank Lucard Manager of Pennsalt Isotron Chemicals Department to Stalfort's plant to witness handling of first tank truckload delivery of aerosol propellants in the area. Stalfort manufactures "Krylon" brand aerosol spray paints.

CLASSIFIED ADVERTISING

HELP WANTED:

WANTED by established aerosol development and packaging company—AEROSOL CHEMIST, with established background; capable of heading research, development and control division. Replies will be held in strict confidence. Address Box 134, c/o Aerosol Age.

Rates for classified advertisements are ten cents per word, $2.00 minimum, except those of individuals seeking employment which *Aerosol Age* will run without charge. Check must accompany all classified advertisements. Address all replies to Classified Advertisements with Box Number, care of *Aerosol Age*, Box 31, Caldwell, N. J. Closing date: tenth of month preceding month of issue.

TGA Holds Annual Convention in N. Y.

THE 2nd annual convention of the Toilet Goods Association was held at the Waldorf-Astoria Hotel in New York City, May 7-9 with the theme of the meeting—"Personality—Key to Future Profits". While there were no specific talks given on aerosols, general mention of the impact of aerosols on the toilet goods market was made by several of the speakers.

Lloyd Stouffer, Editor of *Modern Packaging* in his speech, "Trends in Packaging", mentioned that aerosol packaging offers maximum consumer convenience. Mr. Stouffer pointed out that previous limitations of aerosols in the toilet goods field because of inadequate packaging and incompatibility to water based emulsions had long since been overcome with new formulations and improvement in containers, such as plastic coated glass. He urged manufacturers to promote their aerosol products more aggressively, and cited the Starch study figures to show that three out of four women preferred aerosol colognes after they had become aquainted with them — but that many women had never heard of aerosol cologne and still more had never used any.

Mr. Stouffer also suggested multipacks and combination product sales as other methods to increase the use of aerosols.

The subject of uncoated glass aerosols was brought up in the question and answer session with the question "what is the experience in uncoated glass aerosols?" Mr. Stouffer replied that manufacturers were limited to low pressure aerosols in uncoated glass and said he understands they have been practical for that purpose, with no breakage reported.

A panel discussion was held on the subject, "The Changing Personality of Toiletries Distribution," with a drug wholesaler, a former drug store president, a department store merchandise administrator, a super market executive and a variety store representative all participating and being questioned by a jury box of manufacturers.

SEE ALPHA . . .

For the finest in aerosol laboratory equipment and complete aerosol pressure filling lines.

Alpha Engineering & Machine Works
800 W. Central Road
Mt. Prospect, Ill.
Clearbrook 3-2800

Editors Mailbag

(*From Page 22*)

thinking of enlarging and modernizing our plant and therefore of buying some cold and pressure filling equipment.

We would appreciate it very much if you will send us a complete list of all the machines manufactured in the U. S., together with export prices and sales terms.

C. de Colstoun
S.A.F.C.A.
Paris, France

We have sent M. de Colstoun a list of the principal manufacturers of aerosol filling equipment in this country.

* * *

We are indebted for your name and address to Alpha Eng. and Machine Works, Inc., who are going to supply us with the first aerosol installation to be purchased in Greece. Therefore, you can understand our interest in wishing to have as much aerosol information as possible to better utilize our interesting installation. In the first place we wish to become subscribers to your magazine, which we are informed covers the whole range of aerosol development.

We would also like to obtain pertinent back copies of your magazine which might contain essential information regarding installation, operation, etc., of an aerosol plant.

Lastly, we would like to know more about the possibility of acquiring formulas for the production of insecticides, cosmetics, paints, floor varnishes, and artificial snow. This list is not restrictive.

George E. Joannides
47 Voulis Street
Athens, Greece

We have supplied Mr. Joannides with a file of back copies of Aerosol Age *and have advised him as to possible sources for sample formulas for the products in question. Readers with additional data or formulations are invited to contact Mr. Joannides.*

Survey Finds Aerosol Cologne Preference High

FACED with the choice between dabbing on cologne or spraying it in a light mist from a push-button aerosol package, the American housewife will pick the spray package three times out of four, the Du Pont Company reported last month.

Basing its estimate of consumer preference on a nationwide personal interview survey of housewives in urban areas, the company pointed out that studies indicate that 75% of women use colognes and toilet waters in one form or other, with only one per cent finding such products unsatisfactory. And to point up their liking for the fragrances, 20% of the users disclosed they even employ the colognes as room deodorants or fresheners, apply them to closets and furniture drawers to lend fragrance to clothing, linens, stationery, and other items, and occasionally use them in rinse water for underclothing.

The Du Pont study, tenth in a series conducted by its "Freon" Products Division, disclosed a striking lack of consumer awareness of colognes and toilet waters in aerosol packages. Only 27% of the nation's cologne users said they knew of the self-spraying products, and only 45% of the latter group had tried them.

On the other hand, Du Pont market analysts pointed out, the aerosol colognes now account for slightly more than a third of the U.S. retail dollar sales of colognes. Although introduced only in 1953, aerosol colognes accounted for $21 million of the estimated $56 million cologne sales last year.

In another 10 years, the company predicts, aerosols may capture 75% of the fragrance market. It offers as evidence for its prediction the current users' high degree of satisfaction with the aerosol packages, as well as inherent advantages of the aerosol principle in dispensing fragrances.

Air is one of the biggest enemies of fragrance in conventional perfume and cologne packaging in screw-top bottles. Each time the bottle is opened for application, some of the perfuming agents oxidize and some of the alcohol in the formulation evaporates, with a resultant change in the fragrance. In fact, after a bottle of perfume has been opened several times, the original fragrance is lost, and sometimes the changed fragrance has far less appeal to the user.

It is pointed out that the aerosol package provides an air-tight container and, because it prevents oxidation and evaporation, helps assure that the last drop of perfume in the container will carry the same fragrance as the first.

Du Pont's consumer study, conducted by Daniel Starch and Staff, New York, among housewives in 48 urban areas across the nation, indicated that among those women who had used both aerosol and conventionally packaged colognes 74% preferred the aerosol type.

More than half of those preferring aerosol colognes rated ease-of-use as the reason for their preference.

NEW! NARROW BELT UNITIZED CONVEYOR

BELT WIDTHS OF 1" TO 6"

For Handling Small Dimension Light Weight Containers

Easy to install, economical to operate, this new Unitized Conveyor is available in any length of 5' increments, i.e. 5', 10', 15', 20', etc.

CONSTRUCTED of STANDARD PARTS

making it easy to lengthen the conveyor if increased production makes this necessary. Obsoleteness of equipment is eliminated. Ideally suited for the pharmaceutical, cosmetic, aerosol packaging, drug and chemical, plastics, food products and baking industries.

FREE!

MAIL THIS COUPON FOR FULL DETAILS

ISLAND EQUIPMENT CORP. Dept. AA-6
27-01 Bridge Plaza North
Long Island City 1, N. Y.

Please send particulars on the Unitized Narrow Belt Conveyors.

COMPANY.....

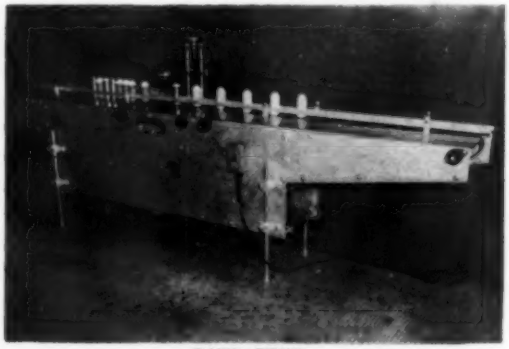
BY.....

ADDRESS.....

CITY.....STATE.....

CODE DATING MACHINE FOR AEROSOL CANS

Will mark the top or bottom or both at the same time



PATS. PEND.

Kiwi® Coders Corporation announces a new power-driven machine for economically and automatically code dating the concave bottoms of pressurized cans or flat bottoms of other round containers. Can also be used as a work table for affixing parts to cans.

Send details on your specific marking problems.
Literature available on all types of applications

Come See Us at Booth 660
at the National Packaging Exposition

Kiwi® Coders Corporation

3804 N. Clark St. • Dept. AA • Chicago 13, Ill.

Index to Advertisers ▸ ▸ ▸ ▸ ▸ ▸ ▸ June 1957

—A—

Abbott Laboratories 12
Aerosol Research Co..... 41
Aerosol Techniques, Inc..4th Cover, 91
Aer-o-Fil Engineering Co..... April
African Pyrethrum..... April
Airosol Co. Inc..... 93
Alpha Eng. & Machine Wks.... 97
American Can Co..... 35
American Cholesterol Co..... 82
Anchor Plastics Co., Inc..... 77
A-M-R 91
Armstrong Laboratories ..... May
Associated Brands, Inc..... 91

—B—

Barr, G. & Co..... 62, 94
Builder's Sheet Metal Works, Inc. 54

—C—

Chase Products Co..... 78, 93
Chemical Insecticide Corp..... April
Clayton Corp..... 52, 53
Cleveland Aerosol Pkg. Corp... 93
Conn. Chem. of Canada Ltd.... 72, 94
Conn. Chem. Research Corp.... 46, 92
Consolidated Packaging Machinery Corp. 22
Continental Can Co..... 60
Continental Filling Corp. 45, 93
Croda, Inc. 79
Crown Cork & Seal Co..... 4

—D—

Dodge & Olcott, Inc..... 11
Dow Chemical Co..... 13, 80
Doyle & Roth Mfg. Co..... 96
Druk-Pak Inc. 88
du Pont de Nemours & Co., E. I. 24

—E—

Emson Research, Inc..... May
Esko Chemical Co. 89, 93
Eveready Products Inc..... 93

—F—

Fairfield Chemical Div..... 23
Florasynth Laboratories, Inc... 87
Fluid Chemical Co.....2nd Cover, 91
Foresman Robert A., Jr..... 74
Fritzsche Bros. ..... May

—G—

Geigy Agricultural Chemicals. 36
General Electric Co..... 84
General Chemical Div..... 56, 57
Givaudan-Delawanna, Inc. 42

—H—

Hydrawlik Co. 81

—I—

Island Equipment Corp..... 98

—J—

J. G. Machine Co..... April
Jordan, W. Alec..... 96

—K—

Kiwi Coders Corp..... 98

—L—

Lancaster, Allwine & Rommel 95
Lenk Manufacturing Co..... 94
Lodes Aerosol Consultants.... 58

—M—

Malmstrom, N. I. & Co..... 86
Magnus, Mabee & Reynard, Inc. May
McLaughlin Gormley King Co.. 67, 68
Modernaire Techniques 93
Mojonnier Associates Inc..... 73
Motomco, Inc. 16

—N—

National Plastics Prod. Co..... April
National Spray Can Filling Corp. 85, 91
Newman Green Inc..... 75

—O—

Ohio Chem. & Surgical Equip. Co. 18
Oil Equipment Laboratories Inc..... May
Old Empire, Inc..... 92
Olin Mathieson Chemical Corp. May

—P—

Par Industries, Inc..... 94
Peerless Tube Co..... April
Pennsalt Chemicals Co..... 38
Penick, S. B., & Co..... 20
Peterson Filling & Packaging Co. .....3rd Cover, 93
Polak & Schwarz Inc..... 76
Polaks Frutal Works..... 70
Powr-Pak, Inc. 90, 91
Precision Valve Corp..... 6, 7
Prentiss Drug & Chem. Co..... 48
Products Mfg. Co..... 91

—R—

Reed Research Corp..... 96
Rhodia Inc. 14
Risdon Mfg. Co..... 50
Gene Rose Co., Inc..... 94

—S—

Schimmel & Co..... 19
Seaquist Mfg. Corp..... 3
Shield Chemical Co..... 91
Solvay Process Division Allied Chemical & Dye Corp. 21
Stalfort of Pa. Inc..... 91
Stalfort Pressure-Pak 15, 92
Sun Tube Corp..... 10

—T—

Tube Manifold Corp..... 88

—U—

Ungerer & Co..... 17

—V—

Valve Corp. of America.....63, 64, 65
van Ameringen-Haebler, Inc... 8, 9
Velsicol Chem. Corp..... May

—W—

West Penn Mfg. & Supply Corp. 97
Western Filling Corp. 94
Wheaton Plastics Co..... May
S. S. White Dental Mfg. Co.... May
Wisc. Alumni Res. Foundation 95

Keep Up with the Aerosol Field!

A Subscription to AEROSOL AGE

will keep you posted . . .

▸ In a rapidly expanding market like the aerosol field, only a magazine devoted specifically and exclusively to aerosols can keep you up to date on latest developments.

AEROSOL AGE

P. O. Box 31
Caldwell, N. J.

OVER THE TRANSOM

THE uproar created by the publication of an article attacking use of unprotected glass aerosols (in the February issue of *Soap, Perfumery & Cosmetics,* and reviewed in *Aerosol Age* for May) is far from over. In fact, the entire container industry seems so stirred up over the subject that we can be sure the last word has not yet been said.

Not only are manufacturers of glass, plastic, coated glass, and metal containers embroiling themselves in the controversy,—but so are a good portion of the fillers and marketers who have vital interests in glass-packed perfume and cologne products.

Those attacking Jack Pickthall's views say that his findings are in distinct disagreement with results obtained by researchers working along the same lines in American laboratories.

They observe that the six feet, six inch height from which Pickthall dropped his test containers is somewhat excessive, and is a height from which an unfairly high percentage of the containers could be expected to break. They feel that such a height is excesive both from the standpoint of the height of the average user, and the height of most medicine cabinets from the floor. They also point out that if such a container should be dropped accidentally, it would usually fall on tile, linoleum, or light concrete, rather than on steel,—as was used in the tests.

Those finding fault with Pickthall's views also question the type of aerosol he used in his tests. Most American colognes are now packaged as ultra-low pressure aerosols. The aerosols used in the British tests, they say, built up higher pressures than are usual in U. S. products.

In future months, we expect to be able to go much further to clear up any question created by either Mr. Pickthall's article, or subsequent comment.

• • •

A bright future for plastic aerosol containers made of "Zytel" is predicted in a recent du Pont brochure which reports on a market study of consumer attitudes. Purchasers of colognes and toilet waters were asked what things are important to them in a container, what they considered to be the advantages and disadvantages of plastic containers, and specifically whether they would be prepared to pay in the neighborhood of 30c more for an aerosol container made of "Zytel" resin. The survey results indicate, so say the folks at Du Pont, that such containers considerably enhance the sales appeal of personal products. In addition to the style possibilities of these containers, the consumer apparently recognizes non-breakability as a particular advantage. Their survey convinced them that the consumer apparently associates non-breakability with containers made of nylon plastic,—and is willing to pay for it.

• • •

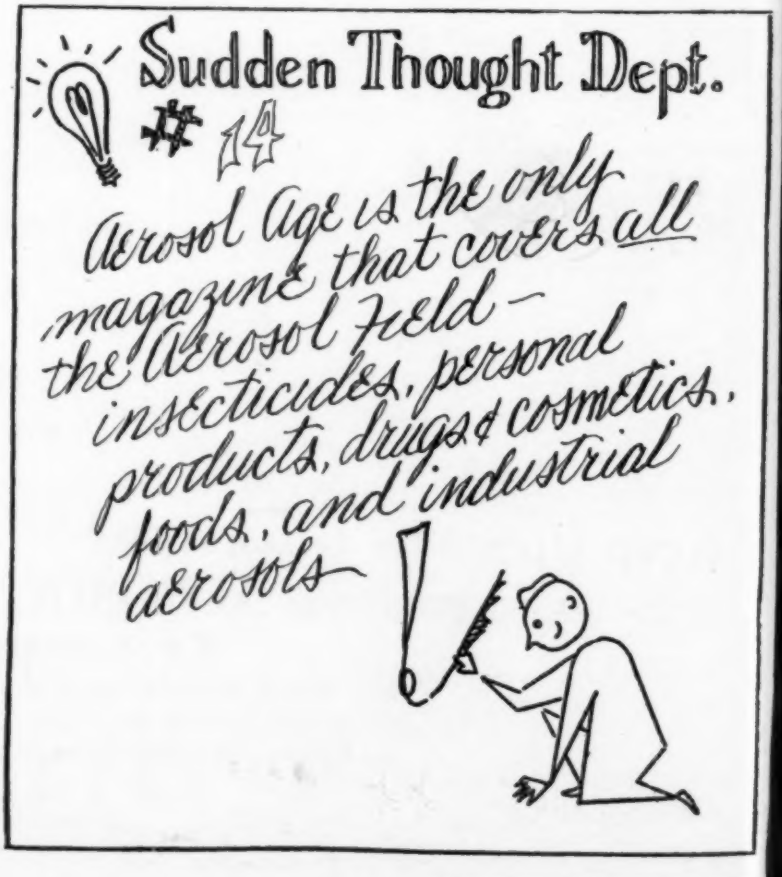
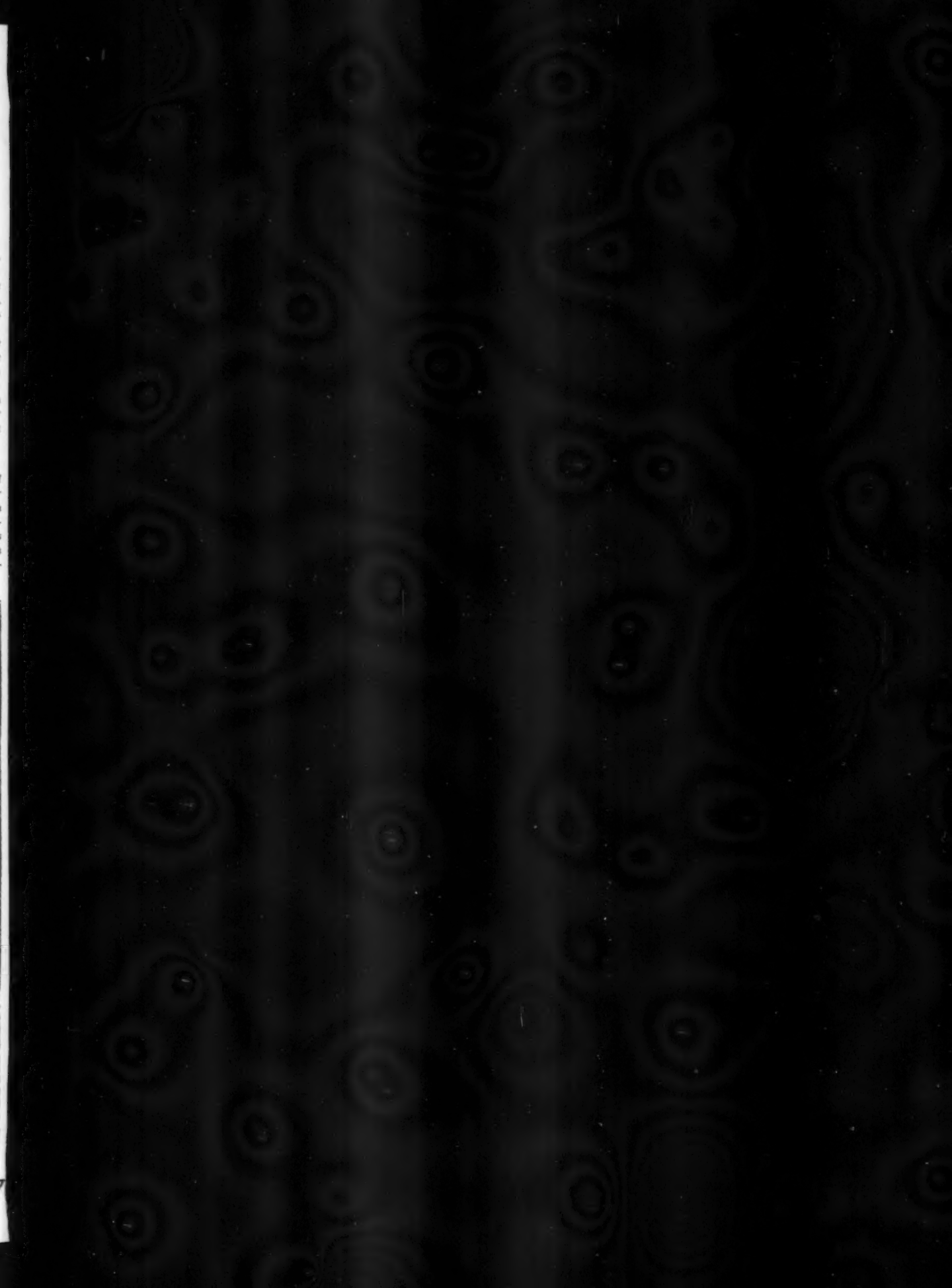
Producers of glass aerosol containers, however, still insist that there is nothing in the record as yet to document the suitability of nylon plastic for aerosol container use. They assert that, while nylon performs well for a period of perhaps three months,—beyond that time there is a sharp rise in vapor transmission which can result in a high degree of propellant and/or product loss. This looks like the makings of another container controversy.

• • •

The annual meeting of the Toilet Goods Association was held as usual at the Waldorf Astoria in New York, earlier this month, with swarms of representatives present from firms making cosmetics, containers, perfuming materials, etc. The aerosol brigade was well represented too,—although not on the program. It gets us how a full meeting program can be conducted in an industry where aerosols have played such an important role over the past five or ten years,—without at least a brace of good talks on some phase of cosmetic aerosols. Maybe the TGA program committee and CSMA's aerosol publicity committee should get together before next year's meeting.

• • •

The 1958 TGA session, by the way, will be held in Miami, a new departure for the organization. The decision to meet in a resort city follows a survey of the membership on this point a year ago. This might be one way to cut attendance down to somewhat more manageable proportions.


Sudden Thought Dept.
#14
Aerosol Age is the only magazine that covers all the Aerosol field — insecticides, personal products, drugs & cosmetics, foods, and industrial aerosols